

Nomina Excludenda

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Butler University
Botanical Studies
(1929-1964)

Edited by

J. E. Potzger

The *Butler University Botanical Studies* journal was published by the Botany Department of Butler University, Indianapolis, Indiana, from 1929 to 1964. The scientific journal featured original papers primarily on plant ecology, taxonomy, and microbiology. The papers contain valuable historical studies, especially floristic surveys that document Indiana's vegetation in past decades. Authors were Butler faculty, current and former master's degree students and undergraduates, and other Indiana botanists. The journal was started by Stanley Cain, noted conservation biologist, and edited through most of its years of production by Ray C. Friesner, Butler's first botanist and founder of the department in 1919. The journal was distributed to learned societies and libraries through exchange.

During the years of the journal's publication, the Butler University Botany Department had an active program of research and student training. 201 bachelor's degrees and 75 master's degrees in Botany were conferred during this period. Thirty-five of these graduates went on to earn doctorates at other institutions.

The Botany Department attracted many notable faculty members and students. Distinguished faculty, in addition to Cain and Friesner, included John E. Potzger, a forest ecologist and palynologist, Willard Nelson Clute, co-founder of the American Fern Society, Marion T. Hall, former director of the Morton Arboretum, C. Mervin Palmer, Rex Webster, and John Pelton. Some of the former undergraduate and master's students who made active contributions to the fields of botany and ecology include Dwight W. Billings, Fay Kenoyer Daily, William A. Daily, Rexford Daudenmire, Francis Hueber, Frank McCormick, Scott McCoy, Robert Petty, Potzger, Helene Starcs, and Theodore Sperry. Cain, Daubenmire, Potzger, and Billings served as Presidents of the Ecological Society of America.

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Plantae microscopicae, aerugineae, olivaceae, violaceae, vel roseae, solitariae, erectae vel varie curvatae, epiphyticae, initio sphaericae aetate protracta cylindricae, diametro 3—7 μ crassae, ad 400 μ altae, primum unicellulares demum in interne in catenam cellularum sphaericarum, ovoidearum, vel cylindricarum uniseriarum (vel raro parce pauci-seriarum) dividendes, vagina hyalina tenue, ad apicem rotunda, primum clausa deinde aperta, ad basem incrassata saepe brevi-stipitata, ad substratum adhaerente; protoplasmate aerugineo, olivaceo, violaceo, vel roseo, homoganeo. FIGS. 253, 254.

Epiphytic on larger algae and other plants in freshwater lakes, ponds, and streams. Well developed plants of *Stichosiphon sansibaricus* are reminiscent in habit of young filaments of *Anabaena* and *Calothrix* spp. Smaller plants can be confused with large solitary cells of *Entophysalis Lemaniae*.

Specimens examined:

ZANZIBAR: auf Cladophora an einer undichten Stelle der Wasserleitung etwas nördlich der Stadt Sansibar, *Stuhlmann* 21, 31 May 1891 (Type of *Chamaesiphon sansibaricus* Hieron., BM [Fig. 253]). VIRGINIA: James river, Richmond, W. E. Wade, Jul. 1951 (DA). FLORIDA: on *Plectonema Wollei* and *Rhizoclonium hieroglyphicum*, Rock Springs, Seminole county, E. M. Davis, 1939 (FH); on Cladophora in the spring-pool, Wakulla Springs, Wakulla county, F. Drouet, G. Madien, & D. Crowson 11506, 27 Jan. 1949 (FC, T); on *Plectonema Wollei* and *Rhizoclonium fontanum* in wet place at Rock Spring Park, Orange county, P. O. Schallert 2500, 1 Jun. 1951 (FC). TENNESSEE: on *R. hieroglyphicum*, Cumberland river at Clarksville, Montgomery county, A. E. Clebsch 2023, 1 Oct. 1949 (FC, TENN); on Pithophora in Blue Basin, Reelfoot lake, Lake county, H. Silva 1156, 2 Jul. 1949 (FC, TENN). ARKANSAS: on *Rhizoclonium hieroglyphicum* in Buffalo river, St. Joe, Searcy county, D. Demaree 25307Aa, 1 Oct. 1944 (FC). PUERTO RICO: on Oedogonium in a reservoir, Rio Piedras, N. Wille 119b, Dec. 1914 (Type of *Chamaesiphon Willei* Gard., NY; isotypes, FH, UC). PHILIPPINES: Los Baños, Laguna, E. Quisumbing 5434, 13 Oct. 1929 (FC, UC); on Cladophora in little spring at base of Igkaras hill, Alimodian, Iloilo, J. D. Soriano 1538, 7 Dec. 1952 (FC, PUH). CHINA: on *Plectonema Wollei*, Wahsien (Soochow), Kiangsu, C. C. Wang 312, 14 Oct. 1930 (FC, UC). INDONESIA: auf Lyogbya aus 3.6 m. Tiefe, Ranau Bedali-See, Ost-Java, *Rutner*, 20—22 Nov. 1928 (Type of *Stichosiphon regularis* Geidl., slide no. KB28 in slide collection of L. Geider). INDIA: on Oedogonium, McPherson lake, Allahabad, P. Maheshwari 21, Jul. 1939 (FH). PAKISTAN: on Pithophora in a stagnant pool in the Botanical Gardens, Lahore, *Ghose*, 13 Oct. 1918 (Type of *Chamaesiphon filamentosus* Ghose in the collection of F. E. Fritsch; isotype, D [Fig. 254]).

NOMINA EXCLUDENDA

The following names have been described on the bases of material not included in the families treated above. Most of these names were originally described as members of the Chroococcaceae, Chamaesiphonaceae, or Clastidiaceae; or were transferred into those families at one time or another; or have been suspected as being members of those families. Where the original specimens have not been available for study, we have designated the original description as the temporary Type, to serve until specimens seen by the author can be found.

The alga most frequently mistaken as one of the coccoid Myxophyceae is that classically referred to in the literature since 1849 as one or another species of *Gloeocystis*. In this study we could not obviate special efforts to understand the large numbers of specimens of this group from all parts of the world that have come to our attention. The genus and its single species are therefore treated here separately:

PALMOGLOEA Kützing, Phyc. Gener., p. 176. 1843. —Type species: *Ulva protuberans* Sm. & Sowerb., 1814.

Bromicolla Eichwald, Förh. Skandinav. Naturforsk., 3rd Möte, Stockholm (13—19 Juli 1842), p. 615. 1843. —Type species: *B. dentica* Eichw., 1843.

Brachia Trevisan, Sagg. Monogr. Alg. Coccot., p. 57. 1848. —Type species: *Palmella crassa* Nacc., 1828.

Hassalia Trevisan, Sagg. Monogr. Alg. Coccot., p. 67. 1848. —Type species: *Haematococcus Hookerianus* Berk. & Hass., 1845.

Urococcus Hassall ex Kützing, Sp. Algar., p. 206. 1849. *Haematococcus* Subgenus *Ourococcus* Hassall, Hist. Brit. Freshw. Alg., p. 322. 1845. —Type species: *Haematococcus Allmanii* Hass., 1845.

Aphanocapsa Nägeli, Gatt. Einzell. Alg., p. 52. 1849. *Microcystis* Subgenus *Capsotibaca* Elenkin, Not. Syst. Inst. Crypt. Horti Bot. Petropol. 2: 67. 1923. —Type species: *Palmella parietina* Nägeli, 1849.

Dactylothece Lagerheim, Öfvers. K. Sv. Vet.-Akad. Förh. 40(2): 64. 1885. —Type species: *D. Braunii* Lagerh., 1883.

Rhodococcus Hansgirg in Wittrock & Nordstedt, Alg. Exs. 14: 697. 1884; in Wittrock & Nordstedt, Bot. Notiser 1884: 128. 1884; Oester. Bot. Zeitschr. 34: 314. 1884. *Chroococcus* Subgenus *Rhodococcus* Hansgirg, Prodr. Algenfl. Böhmen 2: 159. 1892. —Type species: *Rhodococcus caldarii* Hansg., 1884.

Gloeotibaca Sectio *Hyalotibaca* Kirchner in Engler & Prantl, ed. 1, 1(1a): 55. 1898. *Gloeotibaca* Subgenus *Hyalotibaca* Kirchner ex Forti, Syll. Myxophyc., 60. 1907. —Type species: *Gloeocapsa paloa* Kütz., 1843.

The following names are interpreted only on the bases of descriptions of their respective Type species:

Gloeocystis Nägeli, Gatt. Einzell. Alg., p. 65. 1849. —Type species: *G. vesiculosa* Näg., 1848. *Cyanostylon* Geitler, Arch. f. Protistenk. 60: 441. 1928. —Type species: *C. microcystioides* Geitl., 1928.

Vanhoeffenia Wille, Deutsche Südpolar-Exped., 1901—03, 8: 422. 1928. —Type species: *V. antarctica* Wille, 1928.

Hormotheca Jao, Sinensia 15: 77. 1944. —Type species: *H. eripetris* Jao, 1944.

Stilocapsa Ley, Bot. Bull. Acad. Sinica 1: 77. 1947. —Type species: *S. sinica* Ley, 1947.

Asterocapsa Chu, Ohio Journ. Sci. 52(2): 97. 1952. —Type species: *A. gloeotibaceiformis* Chu, 1952.

Plantae pauci- vel multicellulares, in strata vel pulvina increscentes, cellulis in divisione transversale primum hemisphaericis vel hemi-ellipsoideis, aetate provecta sphaericis, ovoideis, vel quasi-fusiformibus, per gelatinum vaginale irregulariter vel regulariter (nonnumquam uniseriatim) distributis; chloroplastidibus viridibus, irregulariter poculiformibus, parietalibus, solitariis, sine pyrenoideis; gelatino vaginale homogener vel lamellosus; reproductione a fragmentatione vel a zoosporis chlamydomonadoideis [?].

One species:

PALMOGLOEA PROTUBERANS (Sm. & Sow.) Kützing, Phyc. Gener., p. 176. 1843; Kützing, Linnaea 17: 85. 1843. *Ulva protuberans* Smith & Sowerby, Engl. Bot. 36: 2583. 1814. *Merrettia protuberans* S. F. Gray, Nat. Arr. Brit. Pl., p. 349. 1821. *Palmella protuberans* Greville, Fl. Edin., p. 323. 1824; Agardh, Syst. Algar., p. 14. 1824. *Coccochloris protuberans* Sprengel, Linn. Syst. Veget., ed. 16, 4(1): 373. 1827. —Type from Sussex, England: Uckfield, W. Borrer (BM).

Chaos bituminosus Bory, Dict. Class. d'Hist. Nat. 3: 16. 1823. *Palmella bituminosa* Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5(Sci. Fis. & Mat.): 46, 56. 1843. *Protococcus bituminosus* Kützing, Tab. Phyc. 1: 4. 1846. *Pleurococcus bituminosus* Trevisan, Sagg. Monogr. Alg. Coccot., p. 32. 1848. *Gloeocapsa bituminosa* Kützing, Sp. Algar., p. 224. 1849. *Chroococcus bituminosus* Hansgirg, Oester. Bot. Zeitschr. 35: 116. 1885; Bot. Centralbl. 22: 25, 27. 1885. —Designated Type from France: sur les pierres calcaires de l'entrée des carrières de St-Leu sous le camp de Cesar, Bory de St-Vincens, Oct. 1815 (PC).

Palmella crassa Naccari, Algol. Adriat., p. 12. 1828; Fl. Veneta 6: 41. 1828. *Coccochloris crassa*

Meneghini in Zanardini, Bihl. Ital. 99: 197. 1840. *Brachia crassa* Trevisan, Sagg. Monogr. Alg. Coccot., p. 57. 1848. *Palmophyllum crassum* Rabenhorst, Fl. Eur. Algar. 3: 49. 1868. —Paratype, here designated as the Type, from Istria: in Adriatico nella acqua del Golfo nominato Quarnero, ex Naccari, 1833 (PC). FIG. 289.

Palmella Grevillei Berkeley, Glean. Brit. Alg., p. 16. 1833. *Botrydina Grevillei* Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 47. 1843. *Botrydiopsis Grevillei* Trevisan, Nomencl. Algar. 1: 70. 1845. *Coccochloris Grevillei* Hassall, Hist. Brit. Fresh-w. Alg. 1: 318. 1845. *Pleococcus Grevillei* Trevisan, Sagg. Monogr. Alg. Coccot., p. 43. 1848. *Anacytis Grevillei* Kürzing, Sp. Algar., p. 209. 1849. *Aphanocapsa Grevillei* Rabenhorst, Fl. Eur. Algar. 2: 50. 1865. *Palmogloea Grevillei* Crouan fr., Fl. Finistère, p. 110. 1867. *Microcystis Grevillei* Elenkin, Monogr. Algar. Cyanophyc., Pars Spec. 1: 126. 1938. *Gloeocystis Grevillei* Drouet & Daily, Lloydia 11: 79. 1948. —Type from Scotland: Kinnordy Moss, R. K. Greville (E); isotype, K. Both specimens are largely parasitized, but enough unparasitized material is present to indicate clearly the nature of the alga. FIG. 274.

Palmella furfuracea Berkeley, Glean. Brit. Alg., p. 18. 1833. *Anacytis furfuracea* Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 47, 94. 1843. *Botrydiopsis furfuracea* Trevisan, Nomencl. Algar. 1: 41. 1845. *Haematococcus furfuraceus* Hassall, Hist. Brit. Fresh-w. Alg. 1: 331. 1845. *Bichatia furfuracea* Trevisan, Sagg. Monogr. Alg. Coccot., p. 65. 1848. —Type from England: Milton, herb. Berkeley (K).

Palmella granosa Berkeley, Glean. Brit. Alg., p. 19. 1833. *Haematococcus granosus* Harvey, Man. Brit. Alg., p. 181. 1841. *Microcystis granosa* Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 47, 85. 1843. *Bichatia granosa* Trevisan, Nomencl. Algar. 1: 60. 1845. *Gloeocapsa granosa* Kürzing, Tab. Phyc. 1: 25. 1846. *Microcystis granulosa* Meneghini ex Rabenhorst, Fl. Eur. Algar. 2: 61. 1865. *Gloeotheca granosa* Rabenhorst, loc. cit. 1865. —Type from England: "Palmella granosa", herb. Berkeley (K). This specimen is chiefly composed of *Palmogloea protuberans* through which are distributed the cysts of Dinoflagellates.

Palmella grumosa Carmichael in Hooker, Engl. Fl. 5(1) [Brit. Fl. 2]: 397. 1833. *Sorospora grumosa* Hassall, Hist. Brit. Fresh-w. Alg. 1: 310. 1845. *Bichatia grumosa* Trevisan, Sagg. Monogr. Alg. Coccot., p. 60. 1848. —Type from Great Britain: "Palmella grumosa", Carmichael (K).

Palmella hyalina β *musciola* Carmichael in Hooker, Engl. Fl. 5(1) [Brit. Fl. 2]: 397. 1833. *P. hyalina* var. *musciola* Harvey ex Trevisan, Sagg. Monogr. Alg. Coccot., p. 56. 1848. *Coccochloris muscorum* Brébisson pro synonym. ex Trevisan, loc. cit. 1848. —Type from Great Britain: Carmichael (K). FIG. 298.

Palmella rivularis Carmichael in Hooker, Engl. Fl. 5(1) [Brit. Fl. 2]: 397. 1833. *Coccochloris rivularis* Hassall, Hist. Brit. Fresh-w. Alg. 1: 317. 1845. *Bichatia rivularis* Trevisan, Sagg. Monogr. Alg. Coccot., p. 66. 1848. *Palmella hyalina* δ *rivularis* Kürzing, Sp. Algar., p. 215. 1849. *Aphanocapsa rivularis* Rabenhorst, Fl. Eur. Algar. 2: 49. 1865. *Palmella hyalina* f. *rivularis* Crouan fr., Fl. Finistère, p. 109. 1867. *P. littoralis* Crouan fr. pro synonym., loc. cit. 1867. *Microcystis Grevillei* f. *rivularis* Elenkin, Monogr. Algar. Cyanophyc., Pars Spec., 1: 129. 1938. —Type from Great Britain: Carmichael (K). FIG. 294.

Palmella botryoides var. *nda* Kürzing, Linnaea 8: 376. 1833. *Botrydina nda* Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 47. 1843. *Botrydiopsis nda* Trevisan, Nomencl. Algar. 1: 70. 1845. —Type from Thuringia: Hirschberg, herb. Kürzing, 6 Jun. (L).

Palmella sordida Kürzing, Linnaea 8: 377. 1833. *Coccochloris sordida* Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 46, 67. 1843. —Type from Germany: an Kellerwänden in Schleusingen, P. T. Kürzing (L). FIG. 283.

Bromicolla aleutica Eichwald, Förh. Skandinav. Naturf., 3rd Möte, Stockholm, 13—19 Juli 1842, p. 615. 1843. —Type from the Aleutian islands: Ins. Unimah (LD). FIG. 290.

Gloeocapsa botryoides Kürzing, Phyc. Gener., p. 173. 1843. *Bichatia botryoides* Trevisan, Nomencl. Algar. 1: 60. 1845. *Gloeocystis botryoides* Nägeli, Gart. Einzell. Alg., p. 65. 1849. —Type from Germany: ad palos, Nordhausen, herb. Kürzing (L). FIG. 255.

Gloeocapsa montana Kürzing, Phyc. Gener., p. 173. 1843. *Bichatia montana* Trevisan, Nomencl. Algar. 1: 61. 1845. *B. Kuetzingiana* Trevisan, Sagg. Monogr. Alg. Coccot., p. 62. 1848. *Gloeocapsa caldarii* Suringar pro synonym., Obs. Phycol. p. 54. 1855. *Gloeocapsa caldarii* Rabenhorst, Fl. Eur. Algar. 2: 37. 1865. *G. montana* γ *caldarii* Suringar pro synonym. ex Rabenhorst, loc. cit. 1865. *G. montana* f. *caldarii* Suringar ex Kirchner, Krypt.-Fl. Schlesien 2(1): 257. 1878. *Bichatia caldarii* Montze, Rev. Gen. Pl. 2: 886. 1891. *Gloeocapsa montana* var. *caldarii* Suringar ex Tilden, Amer. Alg. 2: 197. 1896. —Type from Germany: Nordhausen, herb. Kürzing (L). FIG. 266.

Gloeocapsa palea Kürzing, Phyc. Geogr., p. 173. 1843. *Bichatia palea* Trevisan, Nomencl. Algar. 1: 61. 1845. *Coccochloris vernicola* Brébisson pro synonym. in Kürzing, Sp. Algar., p. 217. 1849. *Gloeotheca palea* Nägeli, Gart. Einzell. Alg., p. 57. 1849. —Type from Bohemia: Carlsbad, herb. Kürzing (L). FIG. 263.

Gloeocapsa salina Roemer, Alg. Deutschl., p. 63. 1845. *Bichatia salina* Trevisan, Sagg. Monogr. Alg. Coccot., p. 64. 1848. —Type from Germany: Salzbad bei Hildesheim (NY). FIG. 269.

- Protococcus dissectus* Kützing, Phyc. Germ., p. 144. 1845. *Pleurococcus dissectus* Trevisan, Sagg. Monogr. Alg. Coccot., p. 34. 1848. *Protococcus dissectus* var. *articulatus* Suringar, Obs. Phycol., p. 56. 1855. *Protococcus viridis* var. *dissectus* Wolle, Freshw. Alg. U. S., p. 181. 1887. —Type from Germany: Nordhausen, F. T. Kützing, 12 Oct. 1839 (L).
- Palmella margaritacea* Kützing, Phyc. Germ., p. 149. 1845. *Cagniardia margaritacea* Trevisan, Sagg. Monogr. Alg. Coccot., p. 49. 1848. *Aphanothece margaritacea* Forti, Syll. Myxophyc., p. 79. 1907. —Type from Dalmatia: Lesina, Botteri (L). FIG. 286.
- Gloeocapsa palea* β minor Kützing, Phyc. Germ., p. 151. 1845. *G. confluens* β *palea* Kützing, Sp. Algar., p. 217. 1849. —Type from Germany: in Tannengesetz, Oldenburg, Koch, Nov. 1844 (L). FIG. 262.
- Haematococcus Allmanii* Hassall, Hist. Brit. Freshw. Alg. 1: 322. 1845. *Hassallia Allmanii* Trevisan, Sagg. Monogr. Alg. Coccot., p. 6. 1848. *Urococcus Allmanii* Hassall ex Kützing, Sp. Algar., p. 206. 1849. —Type from England: "C. Allmanii", herb. Hassall (BM).
- Haematococcus cryptophyllus* Hassall, Hist. Brit. Freshw. Alg. 1: 324. 1845. *Palmella cryptophylla* Carmichael pro synonym. in Hassall, loc. cit. 1845. *Hassallia cryptophylla* Trevisan, Sagg. Monogr. Alg. Coccot., p. 67. 1848. *Urococcus cryptophyllus* Hassall ex Kützing, Sp. Algar., p. 206. 1849. —Type from Great Britain: Appin, Carmichael (BM).
- Haematococcus Hookerianus* Berkeley & Hassall in Hassall, Hist. Brit. Freshw. Alg. 1: 325. 1845. *Hassallia Hookeriana* Trevisan, Sagg. Monogr. Alg. Coccot., p. 67. 1848. *Urococcus Hookerianus* Berkeley & Hassall ex Kützing, Sp. Algar., p. 206. 1849. *Gloeocapsa Hookeri* Berkeley & Hassall in Berkeley, Introd. Crypt. Bot., p. 117. 1857. —Paratype, here designated as the Type, from England: Bristol, Jan. 1847, in herb. Berkeley (K). FIG. 264.
- Palmella borealis* Kützing, Tab. Phyc. 1: 6. 1846. *Cagniardia borealis* Trevisan, Sagg. Monogr. Alg. Coccot., p. 49. 1848. —Type (with that of *Gloeocapsa rupicola* Kütz.) from Norway: Sprengel (L). FIG. 279.
- Palmella Botteriana* Kützing, Tab. Phyc. 1: 10. 1846. *Cagniardia Botteriana* Trevisan, Sagg. Monogr. Alg. Coccot., p. 49. 1848. —Type from Dalmatia: Lesina, Botteri (L). FIG. 282.
- Palmella adriatica* Kützing, Tab. Phyc. 1: 11. 1846. *Cagniardia adriatica* Trevisan, Sagg. Monogr. Alg. Coccot., p. 49. 1848. *Aphanothece Le-Jolisii* Thuret pro synonym. ex Chalon, Liste des Alg. Mar., p. 32. 1905. *Aphanocapsa Le-Jolisii* Frémy, Bull. Soc. Linn. Normandie, ser. 7, 7: 18. 1925. —Type from Dalmatia: ex herb. Meneghini (L). FIG. 287.
- Palmella laxa* Kützing, Tab. Phyc. 1: 11. 1846. *Bichatia laxa* Trevisan, Sagg. Monogr. Alg. Coccot., p. 66. 1848. *Aphanothece laxa* Rabenhorst, Krypt.-Fl. Sachsen 1: 76. 1863. —Type from Netherlands: Goes, van den Bosch 198, Jan. 1846 (L). FIG. 291.
- Gloeocapsa confluens* Kütz., Tab. Phyc. 1: 14. 1846. *Bichatia confluens* Trevisan, Sagg. Monogr. Alg. Coccot., p. 62. 1848. *Gloeosethece confluens* Nägeli, Gatt. Einzeln. Alg., p. 58. 1849. *Gloeocystis confluens* Richter in Hauck & Richter, Phyk. Univ. 1: 81. 1886. *Dactylothece confluens* Haasgier, Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl., 1891(1): 322. 1891. —Type from Germany: Nordhausen, F. T. Kützing (L). FIG. 259.
- Gloeocapsa quaternata* Kützing, Tab. Phyc. 1: 15. 1846. *Coccolchloris quaternata* Brébisson pro synonym. in Kützing, loc. cit. 1846. *Bichatia quaternata* Trevisan, Sagg. Monogr. Alg. Coccot., p. 62. 1848. *Gloeocystis quaternata* Richter in Hauck & Richter, Phyk. Univ. 1: 81. 1886. *Gloeocapsa quaternaria* Kützing ex Geitler, Rabenh. Krypt.-Fl. 14: 197. 1932. —Type from France: Palaise, A. de Brébisson (L). FIG. 278.
- Gloeocapsa cryptococca* Kützing, Tab. Phyc. 1: 15. 1846. *Bichatia cryptococca* Trevisan, Sagg. Monogr. Alg. Coccot., p. 62. 1848. —Type from Harz mountains, Germany: "G. cryptococca Kg." (L). FIG. 258.
- Gloeocapsa polydermica* Kützing, Tab. Phyc. 1: 15. 1846. *Bichatia polydermica* Kuntze, Rev. Gen. Pl. 2: 886. 1891. —Type from France: "Microcystis rupestris", Palaise, Brébisson (L). FIG. 276.
- Gloeocapsa muralis* Kützing, Tab. Phyc. 1: 17. 1846. *Bichatia muralis* Kuntze, Rev. Gen. Pl. 2: 886. 1891. —Type from Germany: an feuchten Mauern, Nordhausen, Kützing (L). FIG. 261.
- Gloeocapsa squamulosa* Brébisson in Kützing, Tab. Phyc. 1: 17. 1846. *Bichatia squamulosa* Kuntze, Rev. Gen. Pl. 2: 886. 1891. —Type from France: Palaise, A. de Brébisson (L). FIG. 275.
- Gloeocapsa microphthalmia* Kützing, Tab. Phyc. 1: 25. 1846. *Bichatia microphthalmia* Kuntze, Rev. Gen. Pl. 2: 886. 1891. —Type from Germany: ad catracta pr. Nordhausen, Kützing (L).
- Palmogloea vericulosa* Kützing, Tab. Phyc. 1: 25. 1846. —Type from Germany: in turfosis humidis pr. Jever, Koch, Apr. 1846 (L).
- Palmella (Gloeocapsa) chrysophthalma* Montagne, Ann. Sci. Nat. III. Bot. 12: 286. 1849. *Gloeocystis chrysophthalma* Montagne ex Parlow in Parlow, Anderson & Eaton, Alg. Exs. Am. Bor. no. 230. 1889. *Bichatia chrysophthalma* Kuntze, Rev. Gen. Pl. 2: 886. 1891. —Type from France: Etretat, F. Baudry (PC). FIG. 273.
- Cryptococcus vernicosus* Kützing, Sp. Algar., p. 146. 1849. —Type from France: Palaise, Le Bailly (L).
- Palmella parietina* Nägeli in Kützing, Sp. Algar., p. 212. 1849. *Aphanocapsa parietina* Nägeli,

Gatt. Einzell. Alg., p. 52. 1849. *Microcystis parietina* Elenkin, Monogr. Algar. Cyanophyc., Pars Spec. 1: 135. 1938. —Type from Switzerland: Rheinfell, Nägeli (L). FIG. 280.

Gloeocapsa flavo-aurantia Kützinger, Sp. Algar., p. 218. 1849. *G. montana* f. *flavo-aurantia* Kützinger ex Rabenhorst, Pl. Eur. Algar. 2: 37. 1865. *G. montana* var. *flavo-aurantia* Kützinger ex Hansgirg, Prodr. Algenfl. Böhmen 2: 152. 1892. —Type from France: au bas d'un mur humide, Chermont, M. Tilleul, Apr. 1846 (in Desmazières, Pl. Crypt. Fr. 1956, NY).

Endospira bryophila Brébisson in Desmazières, Pl. Crypt. France, ser. 2, 1954. 1850. *Coccochloris muscorum* Brébisson pro synonym., loc. cit. 1850. —Type from France: sur le moussu humide (in Desmaz., Pl. Crypt. Fr. 1954, FI).

Gloeocapsa palmelloides Rabenhorst, Alg. Sachs. 27—28: 262. 1853. *Gloeothece palmelloides* Rabenhorst, Krypt.-Fl. Sachsen 1: 75. 1863. —Type from Thuringia: am Falkenstein im Dintharzer Grund, A. Roese, 1852 (in Rabenh. Alg. 262, FC). FIG. 277.

Gloeocapsa insignis Thuret, Mém. Soc. Nat. Sci. Nat. Cherbourg 2: 388. 1854. —Type from France: Cherbourg, sur l'écorce des arbres de la route de Paris, G. Thuret, 19 Jan. 1853 (PC).

Gloeocapsa romana Montagne, Syll. Gen. Spec. Crypt., p. 470. 1856. *Bichatia romana* Kuntze, Rev. Gen. Pl. 2: 886. 1891. —Type from Italy: Roma, E. Fiorini-Manzoni (PC).

Gloeothece distans Stizenberger in Rabenhorst, Alg. Sachs. 97—98: 971. 1860. —Isotypes from Germany: Constanx, E. Stizenberger, Apr. 1860 (in Rabenh. Alg. 971, FC, TA). FIG. 272.

Gloeocystis riparia A. Braun in Rabenhorst, Alg. Eur. 172—173: 1729. 1864. —Isotypes from Germany: Sallenx, Insel Usedom, A. Braun, Aug. 1864 (in Rabenh. Alg. 1729, FC, NY). FIG. 271.

Palmella littorea Croan fr. in Schramm & Mazé, Essai Class. Alg. Guadeloupe, p. 29. 1865; ibid., p. 67. 1866; in Mazé & Schramm, Essai Class. Alg. Guadeloupe, ed. 2, p. 12. 1870—77. —Type from La Guadeloupe: Lac Simpson, Saint-Martin (PC). FIG. 296.

Gloeocapsa Goeppertiana Hilse in Rabenhorst, Algen Eur. 221—222: 2220. 1870. *Gloeothece Goeppertiana* Forti, Syll. Myxophyc., p. 62. 1907. —Isotypes from Silesia (Poland): ad Vratislaviam, Hilse, May 1870 (FH, L, NY, UC).

Chroococcus granulatus Zeller, Journ. Asiatic Soc. Bengal 42(2): 176. 1873; Hedwigia 12: 169. 1873. —Type from Burma: auf blosser Erde, Thabyaegon, S. Kurz (in Rabenh. Alg. 2332, S).

Protococcus affinis Dickie, Journ. Linn. Soc. Bot. 14: 358. 1875. —Type from St. Paul's Rocks, Atlantic Ocean: on salicatic guano in sheltered crevices, H. N. Moseley, 18 Aug. 1873 (BM).

Gloeothece involuta Reinsch, Journ. Linn. Soc. Bot. 15: 206. 1876. —Type from Kerguelen island: Venus Expedition, 1874—75 (K).

Dactylothece Braunii Lagerheim, Öfvers. K. Sv. Vet.-Akad. Förh. 40(2): 64. 1883. —Isotypes from Uppsala, Sweden, in Wittrock & Nordstr., Alg. Exs. 531 (FC, UC). FIG. 256.

Rhodococcus caldarium Hansgirg in Wittrock & Nordstr., Alg. Exs. 14: 697. 1884; in Wittrock & Nordstr., Bot. Notiser 1884: 128. 1884; Oesterr. Bot. Zeitschr. 34: 315. 1884. *Chroococcus caldarium* Hansgirg, Bot. Centralbl. 22: 33. 1885. —Type from Bohemia: in parietibus caldarium hortu botanici Pragae, A. Hansgirg, 22 Dec. 1883 (in Wittrock & Nordstr., Alg. Exs. 697, W; isotypes, FC, L, S, and in Kerner, Fl. Exs. Austro-Hung. 2399 & Nachtrag, S). FIG. 257.

Gloeocapsa salina Hansgirg, Oesterr. Bot. Zeitschr. 35: 115. 1885. —Type from Bohemia: Ouzic ad Kralup, A. Hansgirg, Oct. 1883 (W). FIG. 297.

Inoderma majus Hansgirg, Physiol. & Algol. Stud., p. 93. 1887; Oesterr. Bot. Zeitschr. 37: 122. 1887. —Type from Bohemia: Harrachsdorf, A. Hansgirg, Jul. 1886 (W). FIG. 288.

Gloeocystis rupestris var. *subaurantiaca* Hansgirg, Prodr. Algenfl. Böhmen 1(2): 136. 1888. —Type from Bohemia: Selc nächst Roztok, A. Hansgirg, Nov. 1886 (W). FIG. 295.

Gloeocystis vesiculosa var. *caldarium* Hansgirg, Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl., 1891(1): 321. 1891. —Type from Bohemia: Tetschen, A. Hansgirg, Aug. 1890 (W). FIG. 293.

Spirotaenia closteridia var. *elongata* Hansgirg, Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl., 1891(1): 329. 1891. —Type from Bohemia: Edmundsklamm nächst Herrnskretschen, A. Hansgirg, Sept. 1890 (W).

Gloeocapsa nigra var. *minor* Hansgirg, Prodr. Algenfl. Böhmen 2: 152. 1892. —Type from Bohemia: Eichwald, A. Hansgirg, Jul. 1883 (W). FIG. 284.

Pleurococcus minutus var. *viretens* Hansgirg, Prodr. Algenfl. Böhmen 2: 235. 1892. —Type from Bohemia: zwischen Debrt und Josephthal, A. Hansgirg, 1891 (W). FIG. 281.

Bostryococcus Braunii var. *mucoeus* Lagerheim in Hansgirg, Prodr. Algenfl. Böhmen 2: 242. 1892. —Type from Bohemia: Edmundsklamm nächst Herrnskretschen, A. Hansgirg, Sept. 1890 (W). FIG. 285.

Dactylococcus sabulosus Hansgirg, Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl., 1890(1): 12. 1890. *Keratococcus sabulosus* Pascher, Süswasserfl. 5(Chlorophyc. 2): 217. 1915. —Type from Bohemia: zwischen Dittersbach und Hinter-Dittersbach, A. Hansgirg, Juli 1889 (W).

Urococcus pallidus Lagerheim in Wittrock, Nordstedt, & Lagerheim, Alg. Exs. 23: 1086. 1893. —Isotype from Ecuador: in rupibus humidis ad fluminem Pasara prope Baños, prov. Tungurahua, G. Lagerheim, 2 Jan. 1892 (in Wittrock, Nordstr., & Lagerh., Alg. Exs. 1086, NY).

Dactylococcopsis montana W. & G. S. West, Journ. of Bot. 36: 337. 1898. —Type from Yorkshire, England: Cowgill Wold Moss, Widdale Fell, berb. West, Apr. 1898 (BIRM).

Chroococcus Simmeri Schmidle in Simmer, Allgem. Bot. Zeitschr. 1898: 158. 1899. *Gloeocapsa magma* var. *Simmeri* Nováček ex Geider, Rabenh. Krypt.-Fl. 14: 1164. 1932. —Type from Carinthia, Austria: an einer alten, faulen Lärche im Gurskeothale, Kreuzeckgebiet, H. Simmer, 27 Aug. 1898 (Z).

Chrootheca cryptarum Farlow in Collins, Holden, & Setchell, Phyc. Bor.-Amer. 16: 752. 1900. *Entophyalis cryptarum* Drouin, Field Mus. Bot. Ser. 20: 128. 1942. —Type from Bermuda: Aggar's cave, W. G. Farlow, 1881 (FH). FIG. 265.

Microcystis chroococcoides W. & G. S. West, Brit. Antarct. Exped. 1907—09, 1: 296. 1911. *Chroococcus microcystoides* W. & G. S. West, loc. cit. 1911. —Type from Antarctica: Green lake, Ross island (BIRM).

Dactylococcopsis antarctica Fritsch, Nat. Antarct. Exped. (1901—04), Nat. Hist. 6 (Freshw. Alg.): 22. 1912. —Type from Antarctica: on *Nossoc commune* in damp spots, Granite Harbour, New Bay, no. 47c, 20 Jan. 1902 (BM).

Gloeocapsa sibogae Weber-van Bosse, Siboga Exped., Liste des Alg., 1: 6. 1913. —Type from Indonesia: Sabuda, A. A. Weber-van Bosse, 1899—1900 (L). FIG. 268.

Gloeotheca Vibrio Carter in Compton, Journ. Linn. Soc. Bot. 46: 50. 1922. —Type from New Caledonia: river Dumbéa, R. H. Compton 811 (BM).

Chroococcus constrictus Gardner, Mem. New York Bot. Gard. 7: 8. 1927. —Type from Puerto Rico: Rio Piedras, N. Wille 1965, 23 Mar. 1915 (NY). FIG. 267.

Gloeocapsa corallaginea Gardner, Mem. New York Bot. Gard. 7: 9. 1927. —Type from Puerto Rico: Maricao, N. Wille 1025, 12 Feb. 1915 (NY). FIG. 260.

Gloeocapsa sphærica Gardner, Mem. New York Bot. Gard. 7: 12. 1927. —Type from Puerto Rico: Arecibo—Uruado, N. Wille 1482a, 4 Mar. 1915 (NY). FIG. 270.

Gloeotheca opalothecata Gardner, Mem. New York Bot. Gard. 7: 14. 1927. —Type from Puerto Rico: Hato Arriba near Arecibo, N. Wille 1434, Mar. 1915 (NY). FIG. 292.

Chroococcus schizodermaticus var. *incolatus* Geitler, Arch. f. Hydrobiol., Suppl. 12, 4: 623. 1933. —Type from Java: Travertin-Hügel von Kuripan, Ruitner (slide BK2d in the collection of L. Geitler).

Cyanostylon cylindrocellularis Geitler, Arch. f. Hydrobiol., Suppl. 12, 4: 623. 1933. —Type from Java: Tjurug Dengdeng, Tjibeureum, Gebiet von Tjibodas, Ruitner, 9 Jul. 1929 (slide Tj2IIa α in the collection of L. Geitler).

No original or authentic specimens have been available to us for the following names; the original descriptions are here designated as the Types until the specimens can be found:

Protococcus atrovirens Corda in Sturm, Deutschl. Fl., Abt. 2, 6: 43. 1833. *Microcystis atrovirens* Kützinger, Lionaea 8: 374. 1833. *Protosphaeria atrovirens* Trevisan, Sagg. Monogr. Alg. Coccot., p. 30. 1848. *Gloeocapsa atrovirens* Richter in Hauck & Richter, Phyk. Univ. 1: 42. 1885. *Chroococcus atrovirens* Hansgirg, Bot. Centralbl. 22: 25. 1885.

Coccochloris Scenizii Corda in Sturm, Deutschl. Fl., Abt. 2, 6: 49. 1833.

Gloeocapsa microcosmus Roemer, Alg. Deutschl., p. 62. 1845. *Bichatia microcosmus* Trevisan, Sagg. Monogr. Alg. Coccot., p. 63. 1848.

Haematococcus microsporus Hassall, Hist. Brit. Freshw. Alg. 1: 334. 1845. *Bichatia Hassallii* Trevisan, Sagg. Monogr. Alg. Coccot., p. 65. 1848.

Coccochloris variabilis Hassall, Hist. Brit. Freshw. Alg. 1: 441. 1845. *Bichatia variabilis* Trevisan, Sagg. Monogr. Alg. Coccot., p. 66. 1848.

Coccochloris obscura Hassall, Hist. Brit. Freshw. Alg. 1: 442. 1845. *Bichatia obscura* Trevisan, Sagg. Monogr. Alg. Coccot., p. 65. 1848.

Gloeocystis vesiculosa Nägeli, Gart. Einzell. Alg., p. 65. 1849. *G. ampla* b. *vesiculosa* Kirchner, Krypt.-Fl. Schlesien 2(1): 112. 1878. *Gloeocapsa macrococca* Hansgirg, Prodr. Algenfl. Böhmen 1: 135. 1886.

Spirotaenia muscicola De Bary, Unters. Fam. Conjugat., p. 75. 1858.

Gloeocapsa ocellata Rabenhorst, Krypt.-Fl. Sachsen 1: 72. 1863. *Bichatia ocellata* Kuntze, Rev. Gen. Pl. 2: 886. 1891.

Cyanostylon microcystoides Geitler, Arch. f. Protistenk. 60: 442. 1928.

Vanboesflenia antarctica Wille, Deutsche Südpolar-Exped. 1901—03, 8: 423. 1928.

Gloeocystis cylindrica Jao, Sinensia 11: 251. 1940.

Gloeocystis Bacillus Teiling, Bot. Notiser 1942: 64. 1942.

Chroococcus splendidus Jao, Sinensia 15: 75. 1944.

Hormothese rupestris Jao, Sinensia 15: 77. 1944.

Stilocapsa sinica Ley, Bot. Bull. Acad. Sinica 1: 77. 1947.

Asterocapsa gloeothecaformis Chu, Ohio Journ. Sci. 52(2): 97. 1952.

Entophyalis robusta Chu, Ohio Journ. Sci. 52(2): 100. 1952.

Cyanostylon sinensis Chu, Ohio Journ. Sci. 52(2): 100. 1952.

Plantae aerugineae, virides, nigrae, vel rubrae, crustaceae, pulvinatae, vel stratosae, gelatinosae, coriaceae, corneae, vel farinariae, cellulis sphaericis, ellipsoideis, vel fusiformibus, diametro 2—15 μ crassis; chloroplastidibus viridibus, saepe cum haematochroma obscuratis; gelatino vaginale hyalino vel deinde coerulescente vel rubrescente vel fuscescente, homogeneo aut circa unamquodque cellulum (saepe concentricae vel excentricae) pluri-lamellato, haud raro in caudicibus ramosis incrementum. FIGS. 255—298.

On the ground (often among mosses), on wood and rocks, often in seepage, often in shaded places, and sometimes in intertidal zones on marine shores, throughout the world. The cells are bright green in sunny habitats, and starch may be seen as granules in the cytoplasm when stained with iodine. In shaded habitats, the starch is not evident except in the cells at the surface. Strata are often well developed in the mouths of moist caves where little light penetrates; here the chloroplasts appear blue-green or are obscured by haematochrome in the cytoplasm. Here also the excentric development of the sheath material often results in the formation of branched stalks bearing the cells imbedded in their upper ends. Where more light is available, concentrically or excentrically lamellose sheaths are conspicuous about the individual cells or small groups of cells. The gelatinous material is chiefly pectic and therefore subject to hydrolysis, especially during its formation; completely homogeneous, and even sirupy, gelatinous matrices are often encountered in seepage and continuously wet habitats. Brown and "indicator" red and blue pigments develop in the matrices in dry sunny locations. Fungi grow in the sheaths, and some of them parasitize the cells. With certain fungi the cells continue to grow as lichens. *Palmogloea protuberans* is most easily confused with *Coccolchloris stagnina*, *Entophysalis densa*, and the palmelloid growth-forms of *Stichococcus subtilis* (Kütz.) Klerck. and *Schizogonium murale* Kütz.

Other names excluded from the Chroococcaceae, Chamaesiphonaceae, and Clastidiaceae are the following:

Achnanthes quadrijuga Turpin, Mém. Mus. d'Hist. Nat. Paris 16: 310. 1828. *Gonidium quadrijugum* Meneghini, Linaea 14: 214. 1840. *Agmenellum quadrijugum* Trevisan, Prosp. della Fl. Eug., p. 58. 1842. *Sphaerastrium pictum* Trevisan, Nomencl. Algar. 1: 28. 1845. —The original description is designated as the temporary Type = CHLOROPHYCEAE.

CHROOCODACEAE Subfam. CHROOCYSTEAE Hansgirg, Notarisia 3: 588. 1888. —Type genus: ALLOGONIUM Kütz., Phyc. Gener., p. 245. 1843. —Type species: *A. conservaceum* Kütz., loc. cit. 1843. *A. conservaceum* α *tergestinum* Kütz., Sp. Algar., p. 364. 1849. *A. tergestinum* Kütz., Tab. Phyc. 3: 10. 1853. —Type from Istria: in aqua subsalsa, Zaule, P. T. Kütz. (L) = MICROSPORA STAGNORUM (Kütz.) Lagerh.

Allogonium conservaceum β *Kochianum* Kütz., Sp. Algar., p. 364. 1849. *A. Kochianum* Kütz., Tab. Phyc. 3: 10. 1853. —Type from Oldenburg, Germany: in Gräben, Jever, Koch, Apr. 1844 (L) = MICROSPORA STAGNORUM (Kütz.) Lagerh.

Allogonium halophilum Hansgirg, Physiol. & Algol. Stud., p. 110. 1887; Hansgirg, Hedwigia 26: 22. 1887. *Asterocystis halophila* Forti, Syll. Myxophyc., p. 691. 1907. —Type from Bohemia: in den Salzwassersümpfen bei Auzitz nächst Kralup, A. Hansgirg, Jul. 1886 (W) = ASTEROCYSTIS ORNATA (Ag.) Hamel. FIG. 310.

Allogonium halophilum var. *stagnale* Hansgirg, Prodr. Algenfl. Böhmen 2: 132. 1892. *Asterocystis halophila* var. *stagnalis* Hansgirg ex Forti, Syll. Myxophyc., p. 691. 1907. —The original description is designated here as the temporary Type = ASTEROCYSTIS ORNATA (Ag.) Hamel.

Allogonium ramosum var. *crassum* Hansgirg, Oesterr. Bot. Zeitschr. 39: 4. 1889. —Type from Jugoslavia: im Hafen von Lussin-piccolo, A. Hansgirg, Aug. 1888 (W) = ASTEROCYSTIS ORNATA (Ag.) Hamel. FIG. 302.

Allogonium smaragdinum var. *palustre* Hansgirg, Notarisia 3: 399. 1888. *A. smaragdinum* b. *palustre* Hansgirg, Prodr. Algenfl. Böhmen 2: 132. 1892. *Asterocystis smaragdina* var. *palustris*

Hansg. ex Forti, Syll. Myxophyc., p. 691. 1907. —Type from Bohemia: Gross Wossek, A. Hansg., Aug. 1887 (W). = *ASTEROCYTIS ORNATA* (Ag.) Hamel, FIG. 303.

Allogonium Wolleanum var. *calcicola* Hansg., Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl., 1890(1): 18. 1890. *Asterocytis Wolleana* var. *calcicola* Hansg. ex Forti, Syll. Myxophyc., p. 689. 1907. —Type from Dalmatia: Clissa nächst Spalato, A. Hansg., Aug. 1889 (W) = *ASTEROCYTIS ORNATA* (Ag.) Hamel, FIG. 303.

Allogonium Wolleanum var. *simplex* Hansg., Prodr. Algenfl. Böhmen 2: 131. 1892. —Type from Bohemia: Selc, Hansg., Nov. 1886 (W) = *ASTEROCYTIS ORNATA* (Ag.) Hamel.

Alternantia Geitleri Schiller, Sitzungsber. Oesterr. Akad. Wiss., Math.-Nat. Kl., I, 163: 134. 1954. —The original description is here designated as the temporary Type = BACTERIA.

Alternantia quadriga Schiller, Sitzungsber. Oesterr. Akad. Wiss., Math.-Nat. Kl., I, 163: 136. 1954. —The original description is here designated as the temporary Type = BACTERIA.

Alternantia ramifera Schiller, Sitzungsber. Oesterr. Akad. Wiss., Math.-Nat. Kl., I, 163: 136. 1954. —The original description is here designated as the temporary Type = BACTERIA.

ALTERNANTIACEAE Schiller, Sitzungsber. Oesterr. Akad. Wiss., Math.-Nat. Kl., I, 163: 134. 1954. —Type genus: *ALTERNANTIA* Schiller, loc. cit. 1954. —Type species: *A. serpa* Schiller, loc. cit. 1954. —The original description is here designated as the temporary Type = BACTERIA.

Alternantia tabularis Schiller, Sitzungsber. Oesterr. Akad. Wiss., Math.-Nat. Kl., I, 163: 136. 1954. —The original description is here designated as the temporary Type = BACTERIA.

Anacystis paludosa Rabenhorst, Fl. Eur. Algar. 2: 52. 1865. *Microcystis paludosa* Forti, Syll. Myxophyc., p. 92. 1907. —The original description is here designated as the temporary Type = *ZOOCHLORELLA PARASITICA* Brandt in *OPHRIDIUM* sp. or *STENTOR* sp.

Aphanocapsa albida Zeller, Journ. Asiatic Soc. Bengal 42(2): 176. 1873; Zeller, Hedwigia 12: 169. 1873. —Type from Burma: bei Akgab, prov. Pegu, G. Zeller (in Rabenh. Alg. Eur. 2490, NY [FIG. 346]; isotypes, FC, L, UC) = BACTERIA.

Aphanocapsa crassa Ghose, Journ. Burma Res. Soc. 17(3): 243, 239. 1927. —The original description is here designated as the temporary Type = *SCHIZOCHLAMYS AURANTIA* (Ag.) Dr. & Daily.

APHANOCAPSA Subgenus *AUTAPHANOCAPSA* Hansg., Notatissia 3: 589. 1888. —Type species: *Aphanocapsa membranacea* Rabenhorst, Fl. Eur. Algar. 2: 49. 1865. *Aphanotheca membranacea* Bornet, Bull. Soc. Bot. France 38: 249. 1891. *Gloosiotheca membranacea* Bornet, Mém. Soc. Nat. Sci. Nat. Cherbourg 28: 1751. 1892. —Topotype here designated as the Type, from France: fond d'un ruisseau à Mentone, G. Thuret (in Roumeguère, Alg. d'Eau Douce de France 827, L) = BACTERIA.

Aphanocapsa paludosa Rabenhorst, Krypt.-Fl. Sachsen 1: 73. 1863. —The original description is here designated as the temporary Type = palmelloid *CHLOROPHYCEAE*.

Aphanocapsa rufescens Hansg., Prodr. Algeofl. Böhmen 2: 157. 1892. —Type from Bohemia: Gross-Wenedig, A. Hansg. (W) = spores of *NOSTOC MUSCORUM* Ag. FIG. 347.

Aphanotheca clathrata W. & G. S. West, Trans. Roy. Irish Acad. 33(A): 111. 1906. —Type from Ireland: Lough Neagh, G. S. West, May 1900 (BIRM) = BACTERIA. FIG. 367.

PELODICTYON Lauterborn, Allgem. Bot. Zeitschr. 19: 98. 1913; Lauterborn, Verh. Nat.-Med. Ver. Heidelberg, N. F., 13: 431. 1916. —Type species: *Aphanotheca clathratiformis* Szafer, Bull. Int. Acad. Sci. Cracovie, Cl. Sci. Math. & Nat., ser. B, 1910: 162. 1911. *Pelodictyon clathratiforme* Szafer ex Lauterborn, Allgem. Bot. Zeitschr. 19: 98. 1913; Lauterborn, Verh. Nat.-Med. Ver. Heidelberg, N. F., 13: 431. 1916. *P. Lauterbornii* Geitler in Pascher, Süßwasserfl. 12: 458. 1925. —Type from Galicia, Polish Ukraine: Lubien wielki pod Lwowem, W. Szafer, 9 Apr. 1910 (in Raciborski, Phyc. Polon. 53, FH) = BACTERIA.

Aphanotheca clathratiformis var. *major* Lieberanz, Bull. Int. Acad. Polon. Sci., Cl. Sci. Math. & Nat., ser. B, 1925: 109. 1925. —The original description is here designated as the temporary Type = BACTERIA.

Aphanotheca Gouzei Schmidle, Engler Bot. Jahrb. 30: 242. 1901. —The original description is here designated as the temporary Type = the 1—2-celled hormogonia of *PHORMIDIUM* sp.

Aphanotheca gracilis Schiller, Sitzungsber. Oesterr. Akad. Wiss., Math.-Nat. Kl., I, 163: 125. 1954. —The original description is here designated as the temporary Type = BACTERIA.

Aphanotheca heterospora Rabenhorst, Alg. Eur. 168—171: 1673. 1864; Rabenhorst, Hedwigia 1864: 144. 1864. —Type from Schleswig, Germany: in lacu prope Luthhöst fl. Flensburgensis, R. Haacker (in Rabenh. Alg. 1673, L; isotypes, FC [FIG. 371], NY) = *SCHIZOCHLAMYS AURANTIA* (Ag.) Dr. & Daily.

SCHMIDLEA Lauterborn, Allgem. Bot. Zeitschr. 19: 98. 1913. —Type species: *Aphanotheca luteola* Schmidle, Beih. z. Bot. Centralbl. 10: 179. 1901. *Schmidlea luteola* Lauterborn, Allgem. Bot. Zeitschr. 19: 98. 1913. —Type from Germany: Ludwigshafen, Lauterborn (ZT) = BACTERIA. FIG. 369.

Aphanotheca nidulans var. *endophysica* W. & G. S. West, Journ. Linn. Soc. Bot. 40: 432. 1912. *A. saxicola* f. *endophysica* Elenkin, Moog. Algar. Cyanophyc., Pars Spec. 1: 151. 1938. —Type from Scotland: Loch Kaurine, W. & G. S. West, 16 Mar. 1909 (BIRM) = the orgaonism called *PHORMIDIUM MUCICOLA* Naum. & Hub.

Aphanobeece nidulans var. *thermalis* Hansgirg, Prodr. Algenfl. Böhmen 2: 137. 1892. *A. saxicola* f. *thermalis* Elenkin, Monogr. Algar. Cyanophyc., Pars Spec. 1: 151. 1938. —Type from Bohemia: an warmen Quellen in Karlsbad, *A. Hansgirg*, Aug. 1883 (W) = BACTERIA.

PEDIOCHLORIS Geider in Pascher, Süßwasserfl. 12: 457. 1925. —Type species: *Aphanobeece parallela* Szafer, Bull. Int. Acad. Sci. Cracovie, Cl. Sci. Math. & Nat., ser. B, 1910: 163. 1911. *Pediochloris parallela* Geider in Pascher, Süßwasserfl. 12: 457. 1925. —Type from Polish Ukraine: Lubień wielki pod Lwowem, *W. Szafer*, 9 Apr. 1910 (in Raciborski, Phyc. Polon. 53, PH) = BACTERIA.

Aphanobeece piscinalis Rabenhorst, Fl. Eur. Algar. 2: 66. 1865. *Coccochloris piscinalis* Richter in Hauck & Richter, Phyk. Univ. 5: 240. 1888. *Aphanobeece stagnina* f. *piscinalis* Elenkin, Monogr. Algar. Cyanophyc., Pars Spec. 1: 145. 1938. —Type from the Netherlands: in piscina ad Rosendaal, *van den Bosch* (L) = NOSTOC CARNEUM (Lyngb.) Ag. FIG. 368.

CLATHROCHLORIS Geider in Pascher, Süßwasserfl. 12: 457. 1925. —Type species: *Aphanobeece sulphurica* Szafer, Bull. Int. Acad. Sci. Cracovie, Cl. Sci. Math. & Nat., ser. B, 1910: 162. 1911. *Clathrochloris sulphurica* Geider in Pascher, Süßwasserfl. 12: 457. 1925. —Type from Polish Ukraine: Lubień wielki pod Lwowem, *W. Szafer*, 9 Apr. 1910 (in Raciborski, Phyc. Polon. 53, PH) = BACTERIA.

Aphanobeece vionnensis Schiller, Sitzungsber. Oester. Akad. Wiss., Math.-Nat. Kl., I, 163: 124. 1954. —The original description is here designated as the temporary Type = BACTERIA.

Aribraidesmus glaucescens Wittock, Bib. K. Sv. Ver.-Akad. Handl. 1(11): 55. 1872. *Tetrapedia glaucescens* Boldt ex de Toni, Nuova Notarisa 3: 105. 1892. —The original description is here designated as the temporary Type = TETRAEDRON sp.

Aribraidesmus glaucescens var. *papilliferus* Gutwinski, Spraw. Kom. Fizyogr. Akad. Umiej. Krakowie 25(2): (16). 1890. *Tetrapedia glaucescens* var. *papillifera* Gutwinski, ibid., 30(2): 162. 1895. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.

Asterocysis africana G. S. West, Journ. Linn. Soc. Bot. 38: 196. 1907. —Type from Tanganyika: Kintu bay, *W. A. Cunningham* 79, 26 Aug. 1904 (in the slide collection, BM) = A. ORNATA (Ag.) Hamel.

Asterocysis antarctica W. & G. S. West, Brit. Antarctic Exped. 1907—09, 1: 296. 1911. —The original description is here designated as the temporary Type. The original sketches and notes by the Wests in the British Museum (Natural History) are reproduced here: FIG. 311 = NOSTOC sp.

Baculularia thermalis Frémy, Explor. Parc Nat. Albert, Mission H. Damas, 19: 39. 1949. —The original description is here designated as the temporary Type = the 1—2-celled hormogonia of PHORMIDIUM TENUE (Menegh.) Gom.

Family PALMELLEAE Kütz. in G. S. West, Phyc. Gener., p. 166. 1843. PALMELLEACEAE Nägeli, Die Neuern Algensyst., p. 125. 1847. —Type genus: PALMELLA Lyngbye, Tent. Hydrophyt. Dan., p. 203. 1819. Synonym: CLUZELLA Bory, Dict. Class. Hist. Nat. 3: 14; 4: 234. 1823. —Type species: *Batrachospermum Myosurus* Ducluzeau, Essai s. l'Hist. Nat. Conf. Env. Montpelier, p. 76. 1805. *Palmella Myosurus* Lyngbye, Tent. Hydrophyt. Dan., p. 203. 1819. *Cluzella Myosurus* Bory, Dict. Class. Hist. Nat. 4: 234. 1823. *Coccochloris Myosurus* Sprengel, Linn. Syst. Vegetab., ed. 16, 4(1): 373. 1827. *Hydrurus Ducluzeli* Ag. Consp. Crit. Diatomac. 2: 27. 1830. *Hydrurus Myosurus* Trevisan, Nomencl. Algar. 1: 57. 1845. —It was not considered necessary here to present the complete synonymy of this species. Nägeli in Gart. Einzeln. Alg., p. 66 (1849), selected *Palmella mucosa* Kütz. as the Type for *Palmella* Lyngb.; his selection cannot be considered appropriate under the present International Rules of Nomenclature, since Lyngbye did not treat this species published twenty-four years after his own work appeared. The Type of *Batrachospermum Myosurus* Ducluz. is from France: dans les Cévennes, Ducluzeau (PC) = PALMELLA MYOSURUS (Ducluz.) Lyngb.

BICHATIA Turpin, Mém. Mus. d'Hist. Nat. Paris 16: 163. 1828; Turpin, ibid. 15: 376. 1827. *GLOEOCAPSA* Subgenus *BICHATIA* Forti, Syll. Myxophyc., p. 50. 1907. —Type species: *Bichatia vesiculiformis* Turpin, Dict. Sci. Nat., Végét. Acot., 65: pl. 10. 1816—29; Mém. Mus. d'Hist. Nat. Paris 15: 376. 1827; ibid. 16: 163. 1828. —The original description of Turpin is here designated as the temporary Type = the coccoid growth-form of STICHOCOCCUS SUBTILIS (Kütz.) Klerck.

BOANEMA Ercegovic, Acta Bot. Inst. Bot. Univ. Zagreb. 2: 83. 1927. —Type species: *B. scoparium* Ercegovic, ibid., p. 84. 1927. —The original description is here designated as the temporary Type = primordia of RHODOPHYCEAE. Geider in Engler & Prandl, Natürl. Pflanzenfam., ed. 2, lb: 98 (1942) expresses a similar opinion.

PHYTOCONIS Bory, Mém. S. l. Genres Conferva & Byssus, p. 54. 1795. *COCCODEA* Palisot de Beauvois in Desvaux, Journ. de Bot. 1: 124. 1808. *OLIVIA* S. F. Gray, Nat. Arr. Brit. Pl., p. 349. 1821. *CHAOS* Bory, Dict. Class. d'Hist. Nat. 3: 13, 15. 1823. *SPHAERELLA* Sommerfeldt, Mag. f. Naturvid. 4: 252. 1824. *CHLOROCOCCUM* Fries, Syst. Orb. Veget. 1 (Appendix): 356. 1825. *GLOBULINA* Turpin, Mém. Mus. d'Hist. Nat. Paris 15: 25, 62. 1827. *PRIESTLEYA* Meyen, Linnaea 2: 301. 1827. *MONASSELLA* Gaillon, Aperçu d'Hist. Nat., p. 29. 1833. *BOTRYDINA* Brébisson, Mém. Soc. Acad. Sci., Art. & Belles-Lettres Falaise, p. 3 (of reprint).

1839. *BOTRYDIOPSIS* Trevisan, Nomencl. Algar. 1: 70. 1845. *DESMOCOCCUS* Brand, Arch. f. Protistenk. 52: 344. 1925. *PLEUROCOCOCCUS* Untergattung *TETRACHOCOCCUS* Nägeli, Die Neuern Algensyst., p. 127. 1847. —Type species: *Byssus botryoides* Linnaeus, Sp. Pl., p. 1169. 1753. *Tremella botryoides* Schreber, Spicil. Fl. Lips., p. 141. 1771. *Byssus viridis* Lamarck, Fl. Franc., ed. 1, 1: (103). 1778. *Lepra botryoides* Weber in Wiggers, Primit. Fl. Holsat., p. 97. 1780. *Lichen botryoides* Hagen, Tent. Hist. Lichen., p. x1. 1782. *Phytoconis botryoides* Bory, Mém. s. 1. Genres Conferva & Byssus, p. 54. 1795. *Lepraria botryoides* Acharius, Lichenogr. Suec. Prodr., p. 10. 1798. *Monilia viridis* Sprengel, Fl. Halens., p. 386. 1806. *Globulina botryoides* Turpin, Dict. Sci. Nat. 65 (Végét. Acot.): pl. 4, 6, 7. 1816—29. *Noctoc botryoides* Agardh, Synops. Algar. Scand., p. 135. 1817. *Palmetia botryoides* Lyngbye, Tent. Hydrophyt. Dan., p. 205. 1819. *Olivia botryoides* S. F. Gray, Nat. Arr. Brit. Pl., p. 349. 1821. *Chaet primordialis* Bory, Dict. Class. d'Hist. Nat. 3:16. 1823. *Sphaerella botryoides* Sommerfelt, Mag. f. Naturvid. 4: 252. 1824. *Priestleya botryoides* Meyen, Linnaea 2: 401. 1827. *Chlorococcum vulgare* Greville, Scott. Crypt. Fl. 5: 262. 1827. *Monastella uva* Gaillon, Aperçu d'Hist. Nat., p. 29. 1833. *Coccophysium botryoides* Link, Handb. d. Erkenn. Gewächs. 3: 342. 1833. *Chlorococcum botryoides* Fries, Fl. Scan., p. 330. 1835. *Anacystis botryoides* Meneghini, Consp. Algal. Eugén., p. 324. 1837. *Bostrydina vulgaris* Brébisson, Mém. Soc. Acad. Sci. Art. & Belles-Lettres Falaise, p. 3 (of reprint). 1839. *Plaurococcus vulgaris* Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mac.): 38. 1843. *Pleococcus viridis* Kützinger, Phyc. Gener., p. 170. 1843. *Haematococcus vulgaris* Hassall, Hist. Brit. Freshw. Alg. 1: 333. 1845. *Lepraria viridis* Jeoner, Fl. Tunbridge Wells, p. 150. 1845. *Bostrydiopsis vulgaris* Trevisan, Nomencl. Algar. 1: 70. 1845. *Protococcus communis* and *P. communis* β *Pleurococcus* Kützinger, Tab. Phyc. 1: 4. 1846. *Protosphaeria viridis* Trevisan, Sagg. Monogr. Alg. Coccol., p. 29. 1848. *Plaurococcus botryoides* Trevisan, ibid., p. 42. 1848. *Cagniardia botryoides* Trevisan, ibid., p. 50. 1848. *Protococcus vulgaris* and *P. vulgaris* β *Pleurococcus* Kützinger, Sp. Algar., p. 199. 1849. *P. vulgaris* var. *Pleurococcus* Kützinger ex Mougeot & Nessler, Stirp. Crypt. Vogeso-Rhen., no. 1294. 1850. *Desmococcus vulgaris* Brand, Arch. f. Protistenk. 52: 344. 1925. —Silva & Starr have enlarged the generic synonymy here by designating, in Sv. Bot. Tidskr. 47(2): 245 (1953), types for *Sphaerella* Sommerf. and *Chlorococcum* Fr. from among the above synonyms of *Byssus botryoides* L. The Type specimen upon which all these names depend is that labeled "Byssus botryoides" in herb. Linnaeus in the Linnaean Society of London = *PHYTOCONIS BOTRYOIDES* (L.) Bory.

BYSSUS Linnaeus, Sp. Pl., p. 1168. 1753. —Type species: *B. flos-aquae* Linnaeus, loc. cit. 1753. *Phytoconis natans* Bory, Mém. s. 1. Genres Conferva & Byssus, p. 54. 1795. *Micraloa flos-aquae* Trevisan, Nomencl. Algar. 1: 76. 1845. —It is unnecessary to the purposes of this paper to present the complete synonymy of *B. flos-aquae* L. here. The Type specimen is that labeled "Byssus flos-aquae" in herb. Linnaeus in the Linnaean Society of London = *OSCILLATORIA PROLIFICA* (Grev.) Gom.

Byssus lactea Linnaeus, Sp. Pl., p. 1169. 1753. *Lichen lacteus* Schreber, Spicil. Fl. Lips., p. 139. 1771. *Lepra lactea* Weber in Wiggers, Primit. Fl. Holsat., p. 97. 1780. *Phytoconis lactea* Bory, Mém. s. 1. Genres Conferva & Byssus, p. 56. 1795. *Globulina lactea* Turpin, Dict. Sci. Nat. 65 (Végét. Acot.): pl. 6, fig. 1. 1816—29. *Protococcus lacteus* Kützinger, Linnaea 8: 369. 1833. —The Type, labeled "Byssus lactea", is in the herbarium of Linnaeus in the Linnaean Society of London = a young *LICHEN*.

Callonema Itzigsohnii Reinsch, Contrib. Algol. & Fungol. 1: 41. 1874. *Hormospora pusilla* Itzigsohn pro synon. in Reinsch, loc. cit. 1874. *Allogonium Itzigsohnii* Hansgirg, Hedwigia 26: 23. 1887; Physiol. & Algol. Stud., p. 110. 1887. *Asterocystis Itzigsohnii* Forti, Syll. Myxophyc., p. 690. 1907. —The original description is here designated as the temporary Type = *ASTEROCYSTIS ORNATA* (Ag.) Hamel.

CALLONEMA Reinsch, Contrib. Algol. & Fungol. 1: 40. 1874. —Type species: *C. smaragdinum* Reinsch, ibid. 1: 41. 1874. *Allogonium smaragdinum* Hansgirg, Hedwigia 26: 23. 1887; Physiol. & Algol. Stud., p. 110. 1887. *Asterocystis smaragdina* Forti, Syll. Myxophyc., p. 691. 1907. —The original description is here designated as the temporary Type = *ASTEROCYSTIS ORNATA* (Ag.) Hamel.

CATELLA Alvik, Bergens Mus. Arbok 1934 (Naturvid. Rekke 6): 37. 1934. —Type species: *C. rubra* Alvik, ibid. p. 38. 1934. —The original description is here designated as the temporary Type = *NOSTOCACEAE*.

Chaetococcus hyalinus Kützinger, Osterprogr. Realsch. Nordhausen, p. 6. 1863; Hedwigia 2: 86. 1863. —Type from Cherbourg, France: *A. Le Jolis* 1783 (L) = *ACROCHAETE* sp.

CHALARODORA Pascher, Jahrb. f. Wiss. Bot. 71(3): 460. 1929. —Type species: *C. azurea* Pascher, loc. cit. 1929. —The original description is here designated as the temporary Type = *CHLOROPHYCEAE*.

Chamaesiphon crenothrixoides Zopf, Morphol. Spaltpl., p. 55. 1882; Bot. Centralbl. 10: 35. 1882. —The original description is here designated as the temporary Type = *CRENOTHRIX* sp.

Chamaesiphon gracilis Rabenhorst, Fl. Eur. Algar. 2: 149. 1865. —Type from Germany: Radeberg bei Dresden, *Rabenhorst* (L) = filamentous *BACTERIA*.

Chamaesiphon gracilis f. *major* Magnus & Wille, Sitzungsber. Ges. Naturf. Pr. Berlin 1882: 101.

1882. —The original description is here designated as the temporary Type = AMPHITHRIX sp.
Chamaesiphon byalinus Scherffel, Ber. Deutsch. Bot. Ges. 25: 232. 1907. —The original description is here designated as the temporary Type = filamentous BACTERIA.
- Chamaesiphon marinus* Wille & Rosenvinge, Alg. Novaia-Zemlia og Kara-Haver, p. 4. 1885. —The original description is here designated as the temporary Type = filamentous BACTERIA.
- Chamaesiphon Rostafinskii* var. *minor* Hansgirg, Prodr. Algenfl. Böhmen 2: 123. 1892. —Type from Bohemia: Sct. Prokop, A. Hansgirg, Apr. 1887 (W) = FERROBACTERIACEAE. FIG. 366.
- Chaos sanguinarum* Bory, Dict. Class. d'Hist. Nat. 3: 16. 1823. —Type from France: Lille.
- D. Leseibondoi* (PC) = PORPHYRIDUM CRUENTUM (Sm. & Sow.) Näg.
- CHLOROBIMUM** Nadson, Bull. Jard. Imp. Bot. St. Petersburg 6: 190. 1906. —Type species: *C. limicola* Nadson, loc. cit. 1906. —The original description is here designated as the temporary Type = BACTERIA.
- Chlorococcum Montagnei* Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 30. 1843. *Protosphaeria Montagnei* Trevisan, Sagg. Monogr. Alg. Coccot., p. 30. 1848. *Protococcus Montagnei* Kützinger, Sp. Algar., p. 200. 1849. —Type from Cuba: M. R. de la Sagra, 1836 (PC) = ASTEROCYTIS ORNATA (Ag.) Hamel.
- Chlorococcum Orsinii* f. *finicola* Rabenhorst, Fl. Eur. Algar. 3: 60. 1868. —Type from France: Vache, M. Roberge (in Desmazières, Pl. Crypt. Fr., ed. 3, no. 531, UC) = FLAGELLATA.
- Chlorogloia purpurea* Geitler, Arch. f. Protistenk. 62: 98. 1928. —Paratype from eastern Java: Ranau Pakis, Ruttner (in the slide collection of L. Geitler) = PARASITIZED ALGAE.
- CHROOCOCCIDIUM** Geitler, Arch. f. Hydrobiol., Suppl. XII, 4: 624. 1933. —Type species: *C. gelatinosum* Geitler, loc. cit. 1933. —Type from southern Sumatra: Ranau-See, Ruttner (no. R5b in the slide collection of L. Geitler) = palmelloid FLAGELLATA.
- Chroococcus confervoides* A. Braun, Sitzungsber. Ges. Naturf. Fr. Berlin 1875: 99. 1875. —The original description (although very brief) is here designated as the temporary Type = primordia of TRENTPOHLLA sp.
- Chroococcus lagemiflorus* Hildebrandt ex A. Braun, Sitzungsber. Ges. Naturf. Fr. Berlin 1875: 99. 1875. —The original description is here designated as the temporary Type = primordia of TRENTPOHLLA sp.
- Chroococcus macrococcus* var. *aquaticus* Hansgirg, Oesterr. Bot. Zeitschr. 36: 333. 1886. —Type from Bohemia: Auzitz nächst Kralup, A. Hansgirg, Jul. 1886 (W) = cysts of DINOFLAGELLATES.
- Chroococcus macrococcus* var. *salinarum* Hansgirg, Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl., 1892: 230. 1892. —Type from Istria: in Salinen bei Strognaoo, A. Hansgirg, Jun. 1889 (W) = PERIDINIUM sp. FIG. 345.
- Chroococcus macrococcus* f. *stipitatus* Enwald, Medd. Soc. pro Fauna & Fl. Fenn. 30: 151. 1904. —The original description is here designated as the temporary Type = DINOFLAGELLATES.
- Chroococcus minimus* var. *iriosus* Steinecke, Schrift. Phys.-öko. Ges. Königsberg 56: 25. 1916. —The original description is here designated as the temporary Type = BACTERIA.
- Chroococcus minor* f. *major* W. & G. S. West, Trans. Roy Microsc. Soc. 1894: 17. 1894. —Type from England: Cronkley Fell, North Yorks, W. & G. S. West, 1888 (BIRM) = CHLOROPHYCEAE.
- Chroococcus monilatum* Reinsch, Flora 67: 176. 1884. —The original description is here designated as the temporary Type = BACTERIA.
- Chroococcus pyriformis* Bennett, Journ. Roy. Microsc. London, ser. 2, 8: 3. 1888. *Aphanotheca pyriformis* Hansgirg, Prodr. Algenfl. Böhmen 2: 138. 1892. —The original description is here designated as the temporary Type = ASTEROCYTIS ORNATA (Ag.) Hamel.
- Chroococcus sideroclamys* Skuja, Symbolae Bot. Upsal. 9(3): 38. 1948. —The original description is here designated as the temporary Type = BACTERIA.
- Chroococcus subtilissimus* Skuja, Hedwigia, Sonderabdr. Bd. 77: 21. 1937. —The original description is here designated as the temporary Type = BACTERIA.
- Chroococcus wacholatus* Skuja, Acta Horti Bot. Univ. Larv. 11—12: 42. 1939. —The original description is here designated as the temporary Type = ERYTHROCONIS LITTORALIS Oers.
- Chroococcus Zopfii* Hansgirg, Bot. Centralbl. 22: 24. 1885. —The original description is here designated as the temporary Type = parasitized SCYTONEA or STIGONEA sp.
- CHROODACTYLON** Hansgirg, Ber. Deutsch. Bot. Ges. 3: 14. 1885. **ALLOGONIUM** Section **CHROODACTYLON** Hansgirg, Physiol. & Algol. Stud., p. 110. 1887. **ALLOGONIUM** Subgenus **CHROODACTYLON** Hansgirg, Notariss 3: 588. 1888. —Type species: *Chroodactylon Wollanum* Hansgirg, Ber. Deutsch. Bot. Ges. 3: 14, 15. 1885. *Asterocytis Wollanum* Lagerheim in Wittrock & Nordstedt, Alg. Exs. 16: 769. 1886. *Allogonium Wollanum* Hansgirg, Hedwigia 26: 23. 1887; Oesterr. Bot. Zeitschr. 37: 56. 1887; Physiol. & Algol. Stud., p. 96, 110, 164. 1887. —Type from Bohemia: Fürglitz, A. Hansgirg, Sept. 1884 (in Wittrock & Nordstedt, Alg. Exs. 769, W) = ASTEROCYTIS ORNATA (Ag.) Hamel. FIG. 307.
- Chroolepis coeruleum* Nägeli in Kützinger, Sp. Algar., p. 425. 1849. *Allogonium coeruleum* Hansgirg, Hedwigia 26: 23. 1887; Physiol. & Algol. Stud., p. 110. 1887. —Type from Switzerland: with *Gloeotapsia scopulorum*, an Felsen, Rheinfall, Nägeli, Jul. 1847 (M) = FUNGI.

CHROOMONAS Hansgirg, *Physiol. & Algol. Stud.*, p. 117. 1887. —Type species: *C. Nordstedtii* Hansgirg, *Bot. Centralbl.* 23: 230. 1885. —Type from Bohemia: Nusle ad Pragam, A. Hansgirg (in Wittrock & Nordst., *Alg. Exs.* 800½, FC) = *FLAGELLATA*.

CHROOSTIPES Pascher, *Bot. Deutsch. Bot. Ges.* 32: 351. 1914. —Type species: *C. linearis* Pascher, loc. cit. 1914. —The original description is here designated as the temporary Type = *BACTERIA*.

Chroobacca mobilis Pascher & Petrová, *Arch. f. Protistenk.* 74: 490. 1931. —The original description is here designated as the temporary Type = *ASTEROCYTIS ORNATA* (Ag.) Hamel.

CHROOCOCCACEAE Subfam. *EUCHROOCOCCACEAE* Trib. *THECINEAE* Hansgirg, *Notarisia* 3: 589. 1888. —Type genus: *CHROOTHECE* Hansgirg, *Oesterr. Bot. Zeitschr.* 34: 352. 1884; in Wittrock & Nordstedt, *Alg. Exs.* 14: 696. 1884; in Wittrock & Nordstedt, *Bot. Notiser* 1884: 128. 1884. —Type species: *C. Richteriana* Hansgirg, loc. cit. 1884. —Type from Bohemia: Auzitz prope Kralup, A. Hansgirg, 6 Apr. 1884 (PC) = *ASTEROCYTIS ORNATA* (Ag.) Hamel. FIG. 306.

Chroobacca Richteriana var. *aquatica* Hansgirg, *Oesterr. Bot. Zeitschr.* 36: 333. 1886. —Type from Bohemia: Auzitz nähr Kralup, A. Hansgirg, Jul. 1886 (W) = *ASTEROCYTIS ORNATA* (Ag.) Hamel. FIG. 309.

Chroobacca Richteriana f. *marina* Hansgirg, *Oesterr. Bot. Zeitschr.* 39: 5. 1889. —The original description is here designated as the temporary Type = *ASTEROCYTIS ORNATA* (Ag.) Hamel.

Chroobacca rupestris Hansgirg, *Oesterr. Bot. Zeitschr.* 36: 110. 1886. *C. monococca* var. *rupestris* Hansgirg, *Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl.*, 1891(1): 354. 1891. *C. monococca* b. *rupestris* Hansgirg, *Prodr. Algeofl. Böhmen* 2: 135. 1892. *C. monococca* f. *rupestris* Hansgirg ex Forti, *Syll. Myxophyc.*, p. 31. 1907. —Type from Bohemia: Chuchelbad, A. Hansgirg, Nov. 1885 (W) = *ASTEROCYTIS ORNATA* (Ag.) Hamel.

Chroobacca Willii Gardner, *Mem. New York Bot. Gard.* 7: 3. 1927. —Type from Puerto Rico: Hato Atrihá, Arecibo, N. Wille 1410 (NY) = *ASTEROCYTIS ORNATA* (Ag.) Hamel.

Clastidium cylindricum Whelden in Polunin, *Bot. Canadian East. Arctic* 2: 26. 1947. —The original description has been designated as the Type = *AMPHITHRIX JANTHINA* (Mont.) Born. & Flab.

Clastidium utigerum var. *rivulare* Hansgirg, *Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl.*, 1890(1): 18. 1890. *C. rivulare* Hansgirg, *Prodr. Algeofl. Böhmen* 2: 125. 1892. —Type from Istria: Stroganovo, A. Hansgirg, Apr. 1889 (W) = *AMPHITHRIX* sp.

Clastrocytis bolsatica var. *minor* Lemmermann, *Abh. Naturw. Ver. Bremen* 18: 151. 1905. *Microcystis bolsatica* var. *minor* Lemmermann, *Krypt.-Fl. Mark Brandenburg* 3: 77. 1907. *M. bolsatica* f. *minor* Hollerbach, *Acta Inst. Bot. Acad. Sci. U. R. P. S. S.*, ser. 2, Pl. Crypt. 3: 179. 1936. *M. pulverea* f. *minor* Hollerbach in Elenkin, *Monogr. Algar. Cyanophyc.*, Pars Spec. 1: 123, 124. 1938. —The original description is here designated as the temporary Type = *BACTERIA*.

CLOSTERIOCOCCUS Schmüdle, *Allgem. Bot. Zeitschr.* 1905: 64. 1906. —Type species: *C. viridimontis* Schmüdle, loc. cit. 1906. —The original description is here designated as the temporary Type = *CHLOROPHYCEAE*.

Coccochloris globosa Meneghini, *Mem. R. Accad. Sci. Torino*, ser. 2, 5 (Sci. Fis. & Mat.): 46, 69. 1843. *Palmella globosa* Lenormand pro synonym. in Meneghini, loc. cit. 1843. *Brachia globosa* Trevisan, *Sagg. Monogr. Alg. Coccoch.*, p. 58. 1848. —Type from France: Vire, herb. Lenormand (FI) = *TRACHELOMONAS* sp.

Coccochloris Orsiniana Meneghini, *N. Giorn. de' Letterati* 38: 67. 1839. *Palmella Orsiniana* Kütz. in *Tah. Phyc.* 1: 12. 1846. —Type from Italy: "Coccochloris Orsiniana Mgh." (FI) = *FERROBACTERIACEAE*.

Coccolada viridis Palisot de Beauvois in Link, *Sitzungsber. Ges. Naturf. Fr. Berlin* 1839—59: 12. 1839. —The original description is here designated as the temporary Type = *BOTRYOCOCCUS* sp.

Coccolophytum expallens Link, *Handb. z. Erkenn. Gewächse* 3: 341. 1833. *Protococcus expallens* Rabenhorst, *Deutschl. Krypt.-Fl.* 2(2): 11. 1847. —The original description is here designated as the Type = *CHLOROPHYCEAE*.

COELOMORON Buell, *Torr. Bot. Club* 65: 379. 1938. —Type species: *C. regularis* Buell, loc. cit. 1938. —Para-topotype from Minnesota here designated as the Type: in Lake of the Isles lagoon, Minneapolis, M. P. Buell, R. L. Cain, & M. F. Moore, 26 Jul. 1938 (FC) = *LAMPROCYSTIS ROSEA* (Kütz.) Dr. & Daily.

Coelosphaerium compositum Liebetanz, *Bull. Int. Acad. Cracovie, Cl. Sci. Math. & Nat.*, ser. B, 1925: 109. 1925. —The original description is here designated as the temporary Type = *LAMPROCYSTIS ROSEA* (Kütz.) Dr. & Daily.

Coelosphaerium confertum W. & G. S. West, *Journ. of Bot.* 34: 382. 1896. —Type from Central Africa: Mwangadan river south of Fulasoga, J. W. Gregory, 1893 (BJRM) = *LAMPROCYSTIS ROSEA* (Kütz.) Dr. & Daily.

Coelosphaerium Dicksonii Archer, *Quart. Journ. Microsc. Sci.*, N. S. 19: 440. 1879. —The

- original description is here designated as the temporary Type = NOSTOC sp.
- Coelosphaerium dubium* f. *major* Thomasson, Sv. Bot. Tidskr. 46: 233. 1952. —Isotype from Sweden: Bessvata, K. Thomasson, 18 Jul. 1951 (DA) = FLAGELLATA.
- Coelosphaerium Leloupii* Kufferath, Bull. Inst. Roy. Sci. Nat. Belg. 26(2): 5. 1950. —Topotype from Belgium: Boirs-sur-Geer east of Tongeren, L. Brongersma, 26 Sept. 1951 (D. DA, FC) = LAMPROCYSTIS ROSEA (Kütz.) Dr. & Daily. FIG. 363.
- Coelosphaerium minutissimum* Lemmermann, Ber. Deutsch. Bot. Ges. 18: 98. 1900. —The original description is here designated as the temporary Type = LAMPROCYSTIS ROSEA (Kütz.) Dr. & Daily.
- Coelosphaerium minutissimum* var. *lilacum* Kufferath, Bull. Soc. Roy. Bot. Belg. 74: 95. 1942. —The original description is here designated as the Type = BACTERIA.
- LEMMERMANNIA Elenkin, Acta Inst. Bot. Acad. Sci. U. R. P. S. S., ser. 2, Pl. Crypt. 1: 25. 1933. LEMMERMANIELLA Geitler, in Engler & Prand, Natürl. Pflanzenfam., ed. 2, lb: 62. 1942. —Type species: *Coelosphaerium pallidum* Lemmermann, Bot. Centralbl. 76: 154. 1898. *Lemmermannia pallida* Elenkin, Acta Inst. Bot. Acad. Sci. U. R. P. S. S., ser. 2, Pl. Crypt. 1: 25. 1933. *Lemmermannia pallida* Geitler in Engler & Prand, Natürl. Pflanzenfam., ed. 2, lb: 62. 1942. —The original description is here designated as the temporary Type = BACTERIA.
- COCCOTALES Tribus HYDRUREAE Subtribus BUHYDRUREAE Trevisan, Sagg. Monogr. Alg. Coccot., p. 16, 71. 1848. —Type genus: HYDRURUS Agardh, Syst. Algar., p. xviii. 1824. —Type species: *Conferva foetida* Villars, Hist. Pl. Dauphiné 3: 1010. 1789. *Ulex foetida* Vaucher, Hist. Conf. d'Eau Douce, p. 244. 1803. *Rivularia foetida* Lamarck & De Candolle, Fl. Franc., ed. 3, 2: 5. 1805. *Hydrurus Vaucheri* Agardh, Syst. Algar., p. 24. 1824. *Bangia foetida* Sprengel, Linn. Syst. Vegetab. 4(1): 361. 1827. *Girodella foetida* Gaillon, Aperçu d'Hist. Nat., p. 35. 1833. *Hydrurus foetidus* Trevisan, Sagg. Monogr. Alg. Coccot., p. 75. 1848. —The original description is here designated as the temporary Type = PALMELLA MYOSURUS (Ducluz.) Lyngb.
- Conferva ornata* Agardh, Syst. Algar., p. 104. 1824. *Asterocystis ornata* Hamel, Rév. Algol. 1: 451. 1924. *Goniopirichum ornatum* Bornet pro synonym. in Hamel, loc. cit. 1924. —Type labeled "Conf. ornata ded. Agardh" (S) = ASTEROCYSTIS ORNATA (Ag.) Hamel. FIG. 304.
- CRYPTELLA Pascher, Jahrb. f. Wiss. Bot. 71(3): 459. 1929. —Type species: *C. cyanophora* Pascher, loc. cit. 1929. —The original description is here designated as the temporary Type = FLAGELLATA.
- Cryptococcus brunneus* Kützling, Sp. Algar., p. 146. 1849. —Type from Italy: in fontibus di Acqua Santa, Meneghini 2 (L) = BACTERIA.
- Cryptococcus coccineus* Kützling, Sp. Algar., p. 146. 1849. —Type from Italy: in fonte presso la Capella ai Bagni di Armajolo (L) = BACTERIA.
- Cryptococcus gutturalis* Robin, Hist. Nat. Végét. Parasit., Atlas p. 7, pl. 3, fig. 5, pl. 6, fig. 2. 1853. —The original description is here designated as the temporary Type = BACTERIA.
- Cryptococcus lobatus* Roemer, Alg. Deutschl., p. 72. 1845. —The original description is here designated as the temporary Type = BACTERIA.
- Cryptococcus major* Kützling in Meneghini, Conspect. Algol. Eugau., p. 323. 1837. —Type from the Euganean springs, Italy: ad superficiem aquae etc., Meneghini (L) = FLAGELLATA.
- Fam. CRYPTOCCOCEAE Kützling, Phyc. Gener., p. 147. 1843. —Type genus: CRYPTOCCOCUS Kützling, Algar. Aq. Dulc. Germ. Dec. 3: 28. 1833. —Type species: *C. mollis* Kützling, loc. cit. 1833. —Type from Germany: Schleusingen, 6 Mar. 1832 (L) = BACTERIA and FUNGI.
- Cryptococcus natans* Kützling, Sp. Algar., p. 146. 1849. —Type from Holland: in superf. aqua, van den Bosch 259 (L) = BACTERIA.
- Cryptococcus sanguineus* Kützling, Sp. Algar., p. 891. 1849. —Type from Holland: in limo maritimo, van den Bosch 471 (L) = LAMPROCYSTIS ROSEA (Kütz.) Dr. & Daily.
- CYANARCUS Pascher, Ber. Deutsch. Bot. Ges. 32: 351. 1914. —Type species: *C. hamiformis* Pascher, loc. cit. 1914. —The original description is here designated as the temporary Type = BACTERIA.
- Cyanococcus pyrenogorus* Hansgirg, Beih. z. Bot. Centralbl. 18(2): 521. 1905. The original description is here designated as the temporary Type = BANGIACEAE or "syncyanose" according to Geitler in Engler & Prand, Natürl. Pflanzenfam., ed. 2, lb: 224. 1942.
- CYANODICTYON Pascher, Ber. Deutsch. Bot. Ges. 32: 351. 1914. —Type species: *C. endophyticum* Pascher, loc. cit. 1914. —The original description is here designated as the temporary Type = degenerate trichomes of NOSTOCACEAE.
- CYANOPHORA Korschikov, Arch. Russes Protistol. 3(1—2): 71. 1924. —Type species: *C. paradoxa* Korschikov, loc. cit. 1924. —The original description is here designated as the temporary Type = FLAGELLATES.
- CYANOPTYCHE Pascher, Jahrb. f. Wiss. Bot. 71(3): 459. 1929. —Type species: *C. Gloeocystis* Pascher, ibid. p. 460. 1929. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- CYANOTHECA Pascher, Ber. Deutsch. Bot. Ges. 32: 351. 1914. —Type species: *C. longipes* Pascher, loc. cit. 1914. —The original description is here designated as the temporary Type = FLAGELLATA or FUNGI.

Cylindrocapsa LeNormandii Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mar.): 92. 1843. —Type from France: Falaise, herb. *LeNormand* (Fl) = spores of *ANABAENA OSCILLARIOIDES* Bory.

CYSTOCOCCUS Nägeli, Gatt. Einzell. Alg., p. 84. 1849. —Type species: *C. humicola* Nägeli, ibid., p. 85. 1849. *Chlorococcum humicola* Rabenhorst, Fl. Eur. Algar. 3: 58. 1868. *Protococcus viridis* var. *humicola* Wolle, Fresh-w. Alg. U. S., p. 182. 1887. —Type from Switzerland: Zürich, Burgholzi, am Fusse einer Buche auf feuchter Erde, *Nägeli*, Feh. 1846 (ZT) = *STICHOCOCCUS SUBTILIS* (Kütz.) Klerck.

Dactylococcopsis acicularis Lemmermann, Ber. Deutsch. Bot. Ges. 18: 309. 1900. —The original description is here designated as the temporary Type = *ANKISTRODESMUS FALCATUS* (Corda) Ralfs.

Dactylococcopsis acicularis var. *grandis* Prémy, Arch. de Bot. Caen 3 (Mem. 2): 8. 1930. —The original description is here designated as the temporary Type = *ANKISTRODESMUS FALCATUS* (Corda) Ralfs.

Dactylococcopsis africana G. S. West, Journ. Linn. Soc. Bot. 38: 184. 1907. —Type from Lake Victoria Nyanza: in plankton near Bukoba, W. A. Cunningham 252, 21 Apr. 1905 (in the slide collection, BIRM) = *ANKISTRODESMUS FALCATUS* (Corda) Ralfs.

Dactylococcopsis arcuata Gardner, Mem. New York Bot. Gard. 7: 3. 1927. —Type from Puerto Rico: Caguas, N. Wille 439c (NY) = *PLECTONEMA NOSTOCORUM* Born. FIG. 365.

Dactylococcopsis Echbinis Rosenvinge, K. Danske Videnskab. Selsk., Biol. Medd. 11(7): 10. 1934. —The original description is here designated as the temporary Type = *FUNGI* or *CHLOROPHYCEAE*.

Dactylococcopsis fascicularis Lemmermann, Bot. Centralbl. 76: 153. 1898. —The original description is here designated as the temporary Type = *ANKISTRODESMUS FALCATUS* (Corda) Ralfs.

Dactylococcopsis irregularis G. M. Smith, Ark. f. Bot. 17(13): 6. 1922. —The original description is here designated as the temporary Type = *ANKISTRODESMUS FALCATUS* (Corda) Ralfs.

Dactylococcopsis libyca Marchesoni, Mem. Ist. Ital. Idrobiol. Milano 3: 445. 1947. —Type from Libya: in lacubus salinis Murzuch, R. Cort, May 1933 (DA) = *FUNGUS SPORES*.

Dactylococcopsis mucicola Hustedt, Hedwigia 48: 140. 1908. —The original description is here designated as the temporary Type = *ANKISTRODESMUS FALCATUS* (Corda) Ralfs.

Dactylococcopsis pectinellophila West, Journ. & Proc. Asiatic Soc. Bengal, N. S., 7: 83. 1911. —The original description is here designated as the temporary Type = *CHLOROPHYCEAE*.

Dactylococcopsis rhabdidioides Hansgirg, Notarisia 3: 540. 1888. —Type from Bohemia: Schanzgräben von Prag, A. Hansgirg, Nov. 1883 (W) = spores of *STICHOCOCCUS SUBTILIS* (Kütz.) Klerck. FIG. 359.

Dactylococcopsis rhabdidioides f. *falciformis* Printz, K. Norske Vidensk. Selsk. Skr. 1920(1): 35. 1920. —The original description is here designated as the temporary Type = *ANKISTRODESMUS FALCATUS* (Corda) Ralfs.

Dactylococcopsis rhabdidioides f. *mucicola* Prémy, Arch. de Bot. Caen 3 (Mem. 2): 8. 1930. —The original description is here designated as the temporary Type = *ANKISTRODESMUS FALCATUS* (Corda) Ralfs.

Dactylococcopsis rhabdidioides f. *subtortuosa* Printz, K. Norske Vidensk. Selsk. Skr. 1920(1): 35. 1920. —The original description is here designated as the temporary Type = *ANKISTRODESMUS FALCATUS* (Corda) Ralfs.

DACTYLOCOCOPSIS Hansgirg, Notarisia 3: 590. 1888. —Type species: *D. rupestris* Hansgirg, loc. cit. 1888. —Type from Bohemia: Karlsteio, A. Hansgirg, Jul. 1884 (W) = spores of *STICHOCOCCUS SUBTILIS* (Kütz.) Klerck.

Dactylococcopsis rupestris f. *sigmoides* Ley, Bot. Bull. Acad. Sinica 2: 237. 1948. —The original description is here designated as the temporary Type = *primordia of CHLOROPHYCEAE*.

KERATOCOCCUS Pascher, Süßwasserfl. 5 (Chlorophyc. 2): 216. 1915. —Type species: *Dactylococcus caudatus* Hansgirg, Physiol. & Algol. Stud., p. 86. 1887. *Keratococcus caudatus* Pascher, Süßwasserfl. 5 (Chlorophyc. 2): 216. 1915. —Type from Bohemia: Horovice, A. Hansgirg, Aug. 1884 (W) = spores of *STICHOCOCCUS SUBTILIS* (Kütz.) Klerck.

Dactylococcus caudatus var. *minor* Hansgirg, Prodr. Algenfl. Böhmen 1(2): 146. 1888. —Type from Bohemia: Hohenfurth, A. Hansgirg, Aug. 1884 (W) = spores of *STICHOCOCCUS SUBTILIS* (Kütz.) Klerck.

Dactylococcus rhabdidioides Hansgirg, Oesterr. Bot. Zeitschr. 33: 122. 1887; Physiol. & Algol. Stud., p. 93. 1887. *Keratococcus rhabdidioides* Pascher, Süßwasserfl. 5 (Chlorophyc. 2): 218. 1915. —Type from Bohemia: Mummelfall, A. Hansgirg, Jul. 1886 (W) = spores of *STICHOCOCCUS SUBTILIS* (Kütz.) Klerck.

Dactylothece macrococca Hansgirg, Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl., 1891(1): 323. 1891. —Type from Bohemia: Nieder- und Mittelgrund, A. Hansgirg (W) = palmelloid *STICHOCOCCUS SUBTILIS* (Kütz.) Klerck.

Dermocarpa fossae Pjerdiogstad, Dansk Bot. Ark. 14(3): 34. 1950. —The original description is here designated as the temporary Type = *CHARACIOPSIS* sp.

DISCEREA A. & C. Morren, Rech. Rubéfac. des Eaux, p. 37. 1841. —Type species: *D. purpurea* A. & C. Morren, loc. cit. 1841. —The original description is here designated as the temporary Type = FLAGELLATES.

Endonema gracile Pascher, Jahrb. f. Wiss. Bot. 70: 347. 1929. *Pascherinema gracile* J. de Toni, Noter. Nomencl. Algol. 8. 1936. —The original description is here designated as the temporary Type = FUNGI.

ENDONEMATACEAE Pascher, Jahrb. f. Wiss. Bot. 70: 346. 1929. *PASCHERINEMATACEAE* Geitler in Engler & Prantl, Natürl. Pflanzenfam., ed. 2, lb: 99. 1942. —Type genus: *ENDONEMA* Pascher, Jahrb. f. Wiss. Bot. 70: 346. 1929. *PASCHERINEMA* J. de Toni, Noter. Nomencl. Algol. 8. 1936. —Type species: *Endonema moniliforme* Pascher, Jahrb. f. Wiss. Bot. 70: 346. 1929. *Pascherinema moniliforme* J. de Toni, Noter. Nomencl. Algol. 8. 1936. —The original description is here designated as the temporary Type = FUNGI.

Entophysalis zonata Gardner, Univ. Calif. Publ. Bot. 13: 369. 1927. —Type from Fukien province, China: Kushan near Foochow, H. H. Chung F617, Sept. 1926 (FH) = CAPSOSIRA BREBISII Kütz. FIG. 373.

ERNSTIELLA Chodat, Bull. Soc. Bot. Genève, ser. 2, 3: 126. 1911. —Type species: *E. rula* Chodat, loc. cit. 1911. —The original description is here designated as the temporary Type = AMPHITHRIX sp.

ERYTHROCONIS Oersted, Naturh. Tidsskr. Kjöbenhavn. 3: 55. 1841. —Type species: *E. littoralis* Oersted, loc. cit. 1841. *Marismopodia littoralis* Rabenhorst, Fl. Eur. Algar. 2: 57. 1865. *Sarcina littoralis* Winter, Rabenh. Krypt.-Fl. 1(1): 50. 1884. *Lampropodia littoralis* de Toni & Trev. in Saccardo, Syll. Fung. 8: 1049. 1889. —Type from Denmark: Kallebodstrand (C) = *ERYTHROCONIS LITTORALIS* Oerst.

Eucapsia minusa Fritsch, Nat. Antarctic Exped. (1901—04), Nat. Hist. 6 (Freshw. Alg.): 25. 1912. —Type from Antarctica: Cape Adare, 9 Jan. 1902 (in the collection of F. E. Fritsch) = BACTERIA.

Glaucocystis cingulata Bohlin, Bih. K. Sv. Vet.-Akad. Handl. 23 (Afd. 3, 7): 13. 1897. —The original description is here designated as the temporary Type = OOCYSTACEAE.

Glaucocystis duplex Prescott, Farlowia 1: 371. 1944. —The original description is here designated as the temporary Type = OOCYSTACEAE.

GLAUCOCYSTIS Itzigsohn in Rabenhorst, Alg. Eur. 194 & 195: 1935. 1866. *CYANOCYSTIS* Rabenhorst *pro synon.*, loc. cit. 1866. —Type species: *Glaucocystis nostochinearum* Itzigsohn in Rabenhorst, loc. cit. 1866. *Cyanocystis Itzigsohniana* Rabenhorst *pro synon.*, loc. cit. 1866. *Oocystis cyanea* Nägeli *pro synon.* in Rabenhorst, loc. cit. 1866. —Type from Germany: im Grunewald, Berlin, O. Kuntze, Jul. 1864 (PC) = OOCYSTACEAE.

Glaucocystis nostochinearum var. *gigas* Gurwinski, Bull. Acad. Sci. Craeovie, Cl. Sci. Math. & Nat., 1909: 543. 1909. —The original description is here designated as the temporary Type = OOCYSTACEAE.

Glaucocystis nostochinearum f. *immanis* Schmidle, Engler Bot. Jahrb. 23: 79. 1902. —Type from Lake Nyasa: Mbasitluss, Fulleborn, 27 Apr. 1899 (ZT) = OOCYSTACEAE.

Glaucocystis oocystiformis Prescott, Farlowia 1: 372. 1944. —The original description is here designated as the temporary Type = OOCYSTACEAE.

GLAUCOSPHERA Korsbikov, Arch. f. Protistenk. 70: 222. 1930. —Type species: *G. vacuolata* Korsbikov, loc. cit. 1930. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.

Gloeocapsa ampla Kützing, Phyc. Gener., p. 174. 1843. *Bichatia ampla* Trevisan, Nomencl. Algar. 1: 60. 1845. *Gloeocystis ampla* Rabenhorst, Krypt.-Fl. Sachsen 1: 128. 1863. *Pleurococcus amplus* Rabenhorst, Fl. Eur. Algar. 3: 29. 1868. —Type from Germany: Nordhausen, in herb. Kützing (L) = palmelloid FLAGELLATES. FIG. 351.

Gloeocapsa conspicua Reinsch, Algenfl. Mittl. Th. Franken, p. 33. 1867. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.

Gloeocapsa dubia Wartmann in Rabenhorst, Alg. Eur. 109—110: 1092. 1861. *Bichatia dubia* Richtert in Kuntze, Rev. Geo. Pl. 2: 886. 1891. *Gloeothece dubia* Geitler, Rabenh. Krypt.-Fl. 14: 216. 1932. —Type from Switzerland: St. Gallen, Wartmann (FC) = ASTEROCYTIS ORNATA (Ag.) Hamel. FIG. 308.

Gloeocapsa fenestralis Kützing, Phyc. Gener., p. 173. 1843. *Bichatia fenestralis* Trevisan, Sagg. Monogr. Alg. Coccol., p. 63. 1848. *Gloeocystis fenestralis* A. Braua in Rabenhorst, Algen Eur. 246—248: 2468. 1876. *Gloeocapsa montana* f. *fenestralis* Hollerbach in Elenkin, Monogr. Algar. Cynophyc., Pars Spec. 1: 226. 1938. —Type from Germany: an Mischeer-Feosern, Nordhausen, P. T. Kützing (L) = STICHOCOCCUS BACILLARIS Näg.

GLOEOTHECE Sect. *CHROMOTHECE* Kirchner in Engler & Prantl, Natürl. Pflanzenfam., ed. 1, 1a: 55. 1898. *GLOEOTHECE* Subgen. *CHROMOTHECE* Kirchner ex Forti, Syll. Myxophyc., p. 65. 1907. —Type species: *Gloeocapsa monococca* Kützing, Phyc. Gener., p. 175. 1843. *Bichatia monococca* Trevisan, Nomencl. Algar. 1: 61. 1845. *Gloeocapsa monococca* β *cobaerens* Kützing, Tab. Phyc. 1: 18. 1846. *Palmogloea monococca* Kützing, Sp. Algar., p. 229. 1849. *P. monococca* α *neruginea* Kützing,

loc. cit. 1849. *Gloeotheca monococca* Rabenhorst, Fl. Eur. Algar. 2: 62. 1865. *Chrootheca monococca* Hansgirg, Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl., 1891(1): 354. 1891. —Type from Istria: in den Cataracten des Boscetto, Triest, herb. Kützing (L) = *ASTEROCYTIS ORNATA* (Ag.) Hamel.

Gloeocapsa sillicidiarum Kützing, Phyc. Gener., p. 173. 1843. *Bichatia sillicidiarum* Trevisan, Nomencl. Algar. 1: 62. 1845. —Type from Germany: Steinmühle Hercyniae, F. T. Kützing (L) = primordia of *CHLOROPHYCEAE* (*STIGEOCLONIUM?*). FIG. 350.

Gloeocapsa uaeiformis Roemer, Alg. Deutschl., p. 63. 1845. *Bichatia uaeiformis* Trevisan, Saggi. Monogr. Alg. Coccid., p. 67. 1848. —The original description is here designated as the temporary Type = *CHLOROPHYCEAE*.

Gloeocapsa zostericola Farlow, Bull. Torr. Bot. Club 9: 68. 1882. —An isotype: Woods Hole, Massachusetts, W. G. Farlow (S) = *DINOFAGELLATA*.

Gloeochaete bicornis Kirchner, Jahresh. Ver. Vaterl. Naturk. Württemb. 44: 165. 1888. —The original description is here designated as the temporary Type = *CHLOROPHYCEAE*.

GLOEOCHAETE Lagerheim, Öfvers. K. Sv. Vet.-Akad. Förh. 40(2): 39. 1883. —Type species: *G. Winrockiana* Lagerheim, loc. cit. 1883. —The original description is here designated as the temporary Type = *CHLOROPHYCEAE*.

Gloeococcus agilis Grunow in Rabenhorst, Fl. Eur. Algar. 3: 36. 1868. —Type from Austria: in einem kleinen Bache bei Berndorf, A. Grunow, 1 Sept. 1856 (PC) = *FLAGELLATES*.

Gloeocystis gigas var. *rufescens* A. Braun ex Hansgirg, Prodr. Algenfl. Böhmen 1: 136. 1886. —Type from Bohemia: Pisek, A. Hansgirg (W) = palmelloid *FLAGELLATES*.

Gloeocystis marina Hansgirg, Oesterr. Bot. Zeitschr. 39: 42. 1889. —Type from Istria: Pola, A. Hansgirg, 1888 (W) = basal parts of *MONOSTROMA* sp. FIG. 343.

Gloeocystis scopulorum Hansgirg, Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl., 1892: 239. 1892. —Type from Croatia: Zengg, A. Hansgirg, 1891 (W) = primordia of *CHLOROPHYCEAE*. FIG. 342.

Gloeotheca Baileyana Schmidle, Flora 82: 312. 1896. —Type from Queensland, Australia: Jenkins quarry, Bundamba, W. J. Byram (ZT) = palmelloid *FLAGELLATES*. FIG. 340.

Gloeotheca cystifera var. *maxima* West, Trans. Roy. Microsc. Soc. 1892: 743. 1892. *G. rupestris* var. *maxima* West ex Forti, Syll. Myxophyc., p. 64. 1907. *G. rupestris* f. *maxima* Hollerbach in Elenkin, Monogr. Algar. Cyanophyc., Pars Spec. 1: 250. 1938. —Type from the English Lake District: Bowness (BIRM) = *ANABAENA PLOS-AQUAE* (Lyngb.) Bréb. spores.

Gloeotheca linearis f. *angusta* West, Proc. Roy. Irish Acad. 31: 40. 1912. —Type from Ireland: Lough Gall, Achill island (BIRM) = *BACTERIA*.

Gloeotheca magna Wolle, Bull. Torr. Bot. Club 6: 138. 1877. —Type from Pennsylvania: with *Miserasterias multifida* Wolle in a Desmidiées-Aufsammlung (Rabenh., Alg. Eur. 2510, PC) = palmelloid *CHLOROPHYCEAE*.

Gloeotheca minor Beck in Becker, Hernstein in Niederösterreich, II, Fl. des Gebietes, p. 266. 1886. —Type from Hernstein, Lower Austria: hint. Grillenbergthal, Beck 365 (in the Cryptogamic Herbarium, Charles University, Prague) = *BACTERIA*. FIG. 341.

Gloeotheca irishophila Rabenhorst, Hedwigia 1867: 49. 1867. —Type from England: London, an Chignon-Haaren, Beigel (with *Pleurococcus Beigeli* in Rabenh. Alg. 2053, NY) = *BACTERIA*.

Gloeotheca violacea Rabenhorst, Fl. Eur. Algar. 2: 61. 1865. —The original description is here designated the temporary Type = *BACTERIA*.

GLOIODICTYON Agardh, Consp. Crit. Diatomac. 2: 25. 1830. —Type species: *G. Blyssii* Agardh, ibid. p. 26. 1830. *Schizonema reticulatum* Agardh pro synonym., loc. cit. 1830. —Type from Norway: Tofledaljan, Nowi Trondhjem, Blyss (LD) = sterile *ZYGNEMA* sp.

Gloionema globiferum Agardh, Consp. Crit. Diatomac. 2: 31. 1830. —Type from Traneberg (LD) = *DIATOMS* in the sheaths of *OPHRIDIUM* sp.

Gloionema Leiblinii Agardh, Consp. Crit. Diatomac. 2: 31. 1830. —Type: *Leiblin* 17 (LD) = *DIATOMS*.

GLOIONEMA Agardh, Dispos. Algar. Succ., p. 45. 1882. —Type species: *G. paradoxum* Agardh, loc. cit. 1812. —Type from Sweden: Jäder (LD) = EGGS OF ANIMALS.

Gloionema vermicularis Agardh, Flora 10(2): 630. 1827. —Type from Bohemia: Carlsbad (LD) = *DIATOMS*.

Gomphosphaeria aurantiaca Bleisch in Rabenhorst, Alg. Eur. 181—182: 1810. 1865. *G. aponina* var. *aurantiaca* Bleisch ex Kirchner, Krypt.-Fl. Schlesien 2(1): 255. 1878. *G. aponina* f. *aurantiaca* Forti, Syll. Myxophyc., p. 98. 1907. —Type from Silesia (Poland): auf dem Galgenberge bei Strehlen, Bleisch (L) = *BOTRYOCOCCUS BRAUNII* Kütz.

LAMPROPEDIA Schröter, Pilze Schlesiens 1: 151. 1886. —Type species: *Gonium hyalinum* Ehrenberg, Abh. K. Akad. Wiss. Berlin 1831: 75. 1832. *Merismopodia hyalina* Kützing, Phyc. Germ., p. 142. 1845. *Sarcina hyalina* Winter, Rabenh. Krypt.-Fl. 1(1): 51. 1884. *Lampropedia hyalina* Schröter, Pilze Schlesiens 1: 151. 1886. —The original description is here designated the temporary Type = *BACTERIA*.

Gonium punctatum Ehrenberg, Abh. K. Akad. Wiss. Berlin 1833: 250. 1834. *Gonium*

punctatum Meneghini, Linnaea 14: 214. 1840. —The original description is here designated as the temporary Type = FLAGELLATES.

Haematococcus arenarius Hassall, Hist. Brit. Freshw. Alg. 1: 330. 1845. *Bichasia arenaria* Trevisan, Sagg. Monogr. Alg. Coccor., p. 66. 1848. *Gloeocapsa arenaria* Rabenhorst, Fl. Eur. Algar. 2: 39. 1865. —Type from England: Tunbridge Wells common, Dec. 1844 (BM) = palmelloid STICHOCOCCUS SUBTILIS (Kütz.) Klerck.

Haematococcus atomarius Flotow, Nova Acta Acad. Caes. Leop.-Car. Nat. Cur. 20(2): 424. 1842. *H. pluvialis* var. *atomarius* Flotow pro synon., loc. cit. 1842. —The original description is here designated as the temporary Type = PROTOCOCCUS GREVILLEI (Ag.) Crouan.

Haematococcus fuliginosus Meneghini, Consp. Algol. Eugan., p. 323. 1837. *Protococcus fuliginosus* Lenormand in Kützing, Tab. Phyc. 1: 3. 1846. *Chroococcus fuliginosus* Rabenhorst, Fl. Eur. Algar. 2: 34. 1865. —Kützing's notation of the original locality is obviously an editorial error, since his name is based upon the same specimen as is Meneghini's. The Type is from Italy: aquis thermalibus Euganeis (L) = BACTERIA. FIG. 370.

COCOTALES Tribus PROTOCOCCAE Subtribus HAEMATOCOCCAE Trevisan, Sagg. Monogr. Alg. Coccor., p. 16. 37. 1848. —Type genus: HAEMATOCOCCUS Agardh, Icon. Alg. Eur., no. 22. 1828—35. Synon.: GLOIOCOCCUS Shuttleworth, Bibl. Univ. Genève 25: 405. 1840. —Type species: *Haematococcus Grevillei* Agardh, Icon. Alg. Eur., no. 23. 1828—35. *Microcystis Grevillei* Kützing, Linnaea 8: 372. 1833. *Gloiooccus Grevillei* Shuttleworth, Bibl. Univ. Genève 25: 405. 1840. *Protosphaeria Grevillei* Trevisan, Sagg. Monogr. Alg. Coccor., p. 28. 1848. *Protococcus Grevillei* Crouan fr., Fl. Finistère, p. 109. 1867. —The type species of *Haematococcus* Ag. was designated by Silva & Starr, Sv. Bot. Tidskr. 47(2): 246 (1953). The Type is from Scotland: "Palmella nivalis" det. Greville, island of Lismore, Carmichael (K) = PROTOCOCCUS GREVILLEI (Ag.) Crouan. FIG 372.

Haematococcus insignis Hassall, Hist. Brit. Freshw. Alg. 1: 324. 1845. *Urococcus insignis* Hassall ex Kützing, Sp. Alg., p. 207. 1849. *Hastallia insignis* Trevisan, Sagg. Monogr. Alg. Coccor., p. 67. 1848. —The original description is here designated as the temporary Type = encysted FLAGELLATES.

Haematococcus mucosus Morren, Rech. Rubéf. des Eaux, p. 104. 1841. *Microcystis Morrenii* Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5(Sci. Fis. & Mat.): 87. 1843. *Bichasia mucosa* Trevisan, Nomencl. Algar. 1: 61. 1845. —The original description is here designated as the temporary Type = FLAGELLATES.

MICROCYSTACEAE Elenkin, Acta Instr. Bot. Acad. Sci. U. R. S. S., II, 1: 19. 1923. MICROCYSTIDACEAE Elenkin, Monogr. Algar. Cyanophyc., Pars Spec. 1: 93. 1938. —Type genus: MICROCYSTIS Kützing, Linnaea 8: 372. 1833. MICROCYSTIS Unterabtheilung MICROCYSTIS Kützing, Tab. Phyc. 1: 7. 1846. MICROCYSTIS Subgenus EUMICROCYSTIS Elenkin, Not. Syst. Inst. Crypt. Horti Bot. Petropol. 2: 67. 1923. —Type species: *Haematococcus Nollii* Agardh, Icon. Alg. Eur., no. 22. 1828—35. *Microcystis Nollii* Kützing, Linnaea 8: 372. 1833. —Geider in Engler & Prandl, Natürl. Pflanzenfam. ed. 2, lb: 46 (1942) does not irrevocably designate *M. aeruginosa* as the "Leitart" of *Microcystis* Kütz. Kützing transferred his *Micraloa aeruginosa* into *Microcystis* ten years after he had described both; in another six years he transferred it into his genus *Polycystis*. The type species designated here is historically the correct one: *Microcystis Nollii* Kütz. Isotypes from Schleswig collected by Nolte are in several herbaria (FC, L, UC) = EULENA sp.

Haematococcus Orsinii Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5(Sci. Fis. & Mat.): 22. 1843. *Protococcus Orsinii* Kützing, Phyc. Germ., 146. 1845. *Protosphaeria Orsinii* Trevisan, Sagg. Monogr. Alg. Coccor., p. 29. 1848. *Chroococcus Orsinii* Rabenhorst, Alg. Eur. 127—128: 1269. 1862. *Chlorococcum Orsinii* Meneghini ex Rabenhorst, Fl. Eur. Algar. 3: 60. 1868. —Isotype from Italy: Acqua Santa, ex herb. Meneghini (L) = EULENA sp.

Haematococcus pluvialis Flotow, Nova Acta Caes. Leop.-Car. Nat. Cur. 20(2): 415. 1842. *Protococcus pluvialis* Kützing, Phyc. Germ., p. 146. 1845. *P. pluvialis* α *leprosus* Kützing, loc. cit. 1845. *Protosphaeria pluvialis* Trevisan, Sagg. Monogr. Alg. Coccor., p. 28. 1848. *Chlamidococcus pluvialis* A. Braun, Betracht. über Erscheinen. Verjüng. i. d. Natur, p. 147. 1849—50. —Topotype from Bohemia: Hirschberg, Flotow (in Rabenb. Alg. 71, FC) = PROTOCOCCUS GREVILLEI (Ag.) Crouan.

Haematococcus vesiculatus Morren, Rech. Rubéf. des Eaux, p. 104. 1841. *Coccolchloris vesiculosa* Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5(Sci. Fis. & Mat.): 70. 1843. —The original description is here designated as the temporary Type = FLAGELLATES.

HETEROCYANOCOCCUS Kufferath, Ann. Crypt. Exot. 2: 51. 1929. —Type species: *H. Haumanii* Kufferath, loc. cit. 1929. —The original description is here designated as the temporary Type = NOSTOC sp.

ASTEROCYTIS Gobi, Trudy St. Petersb. Obshech. Estestvoisp. 10: 86. 1879. GLAUCONEMA Reinhardt, Algol. Izsladov., p. 240. 1885. ALLOGONIUM Sect. ASTEROCYTIS Hansgirg, Physiol. & Algol. Stud., p. 109. 1887. ALLOGONIUM Subgenus ASTEROCYTIS Hansgirg, Notarisia 3: 588. 1888. —Type species: *Hormospora ramosa* Thwaites in Harvey, Phycol. Brit. 4: pl. CCXIII. 1849. *Asterocystis ramosa* Gobi, Trudy St. Petersb. Obshech. Estestvoisp. 10: 86. 1879. *Glaucanema*

ramosum Reinhardt, *Algol. Izsladov.*, p. 240. 1885. *Goniotrichum ramosum* Hauck, *Meeresalg.*, p. 519. 1885. *Cbroodactylon ramosum* Hansgirg, *Ber. Deutsch. Bot. Ges.* 3: 19. 1885. *Allogonium ramosum* Hansgirg, *Physiol. & Algol. Stud.*, p. 110. 1887. —The original description is here designated as the temporary Type = *ASTEROCYTIS ORNATA* (Ag.) Hamel.

HYALOCOCCUS Schröter, *Pilze Schlesiens* 1: 152. 1886. —Type species: *H. pneumoniae* Schröter, loc. cit. 1886. —The original description is here designated as the temporary Type = BACTERIA.

Hydrococcus ericetorum Kützinger, *Phyc. Germ.*, p. 154. 1845. *Oncobysa ericetorum* Rabenhorst, *Fl. Eur. Algar.* 2: 69. 1865. —Type from the Harz mountains, Germany: am Wege nach Sonderhausen, herb. Kützinger (L) = young LICHEN.

Hydrococcus guadelupensis Crouan fr. in Schramm & Mazé, *Essai Class. Alg. de la Guadeloupe*, p. 29. 1865; idem, p. 67. 1866. *Oncobysa guadelupensis* Crouan fr. in Mazé & Schramm, *Essai Class. Alg. Guadeloupe*, ed. 2, p. 13. 1870—77. —Type from La Guadeloupe: Basse Terre, Mazé & Schramm (PC) = *NOSTOC SPHAERICUM* Vauch.

Hydrococcus lacustris Brügger, *Jahresber. Naturf. Ges. Graubündens*, N. F., 8: 250. 1863. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.

Hyella infestans Howe, *Mem. Torrey Bot. Club* 15: 14. 1914. *Myxobryella infestans* Geidter, *Rabenh. Krypt.-Fl.* 14: 381. 1932. —Type from Peru: Bay of Sechura, *Coker 157pp* (NY) = *ERYTHROCLADIA* sp.

Hyella torresii Chodat, *Bull. Soc. Bot. Gèneve*, ser. 2, 13: 113. 1921. —The original description is here designated as the temporary Type = FISCHERELLA AMBIGUA (Näg.) Gom.

Hypobolia aurantiaca Libert, *Crypt. Arduennae* 4: 379. 1837. *Cbroococcus aurantiacus* de Toni, *Malpighia* 1: 326. 1887. —Type from Belgium in Libert, *Pl. Crypt. Arduennae* no. 379 (BR) = *BOTRYDIUM GRANULATUM* (L) Grev. FIG. 355.

Inoderma fontanum Kützinger, *Phyc. Germ.*, p. 150. 1845. *Cagniardia fontana* Trevisan, *Sagg. Monogr. Alg. Coccot.*, p. 51. 1848. *Inoderma lamellosum* b. *fontanum* Rabenhorst, *Fl. Eur. Algar.* 3: 368. 1868. *I. lamellosum* var. *fontanum* Rabenhorst ex Hansgirg, *Prodr. Algenfl. Böhmen* 1: 140. 1886. —Type from Weissenfels, Germany, in Kützinger, *Alg. Aq. Dulc. Dec.* 4: 39 (L) = DIATOMS.

INODERMA Kützinger, *Alg. Aq. Dulc. Dec.* 4: 39. 1833. —Type species: *I. lamellosum* Kützinger, loc. cit. 1833. *Cagniardia lamellosa* Trevisan, *Sagg. Monogr. Alg. Coccot.*, p. 51. 1848. —Type from Tennaedri, Germany, in Kützinger, *Alg. Aq. Dulc. Dec.* 4: 40 (L) = DIATOMS.

EMBRYOSPHAERIA Trevisan, *Sagg. Monogr. Alg. Coccot.*, p. 36. 1848. —Type species: *Lepra infusionum* Schrank, *Neue Ann. der Bot.* 1(3): 4. 1794. *Lepraria infusionum* Schrank, *Denkschr. K. Akad. Wiss. München* 1811: 10. 1811. *Protococcus Monas β aquaticus* Kützinger, *Linnaea* 8: 367. 1833. *Chlorococcum infusionum* Meneghini, *Mem. R. Accad. Sci. Torino*, ser. 2, 5(Sci. Fis. & Mat.): 9. 27. 1843. *Protococcus minor γ infusionum* Kützinger, *Tab. Phyc.* 1: 3. 1846. *P. Meneghinii* Kützinger, *Tab. Phyc.* 1: 4. 1846. *Protococcus Monas* var. *aquaticus* Kützinger ex Trevisan, *Sagg. Monogr. Alg. Coccot.*, p. 26. 1848. *Embryosphaeria Meneghinii* Trevisan, *ibid.*, p. 37. 1848. *Chlorococcum Meneghinii* Brébisson pro synon. in Trevisan, loc. cit. 1848. *Protococcus infusionum* Kirchner, *Krypt.-Fl. Schlesiens* 2(1): 103. 1878. *P. viridis* var. *infusionum* Wolle, *Fresh-w. Alg. U. S.*, p. 182. 1887. *Chlorella infusionum* Beijerinck, *Bot. Zeit.* 48: 758. 1890. *Gloeoecystis infusionum* W. & G. S. West, *Journ. of Bot.* 37: 223. 1899. —The type species for *Embryosphaeria* Trevis. was designated by Silva & Starr, *Sv. Bot. Tidskr.* 47(2): 246 (1953). The original description of *Lepra infusionum* Schrank is here designated as the temporary Type of this species = FLAGELLATES.

Lepraria kermesina Wrangel, *K. Vetensk.-Acad. Handl.* 1823: 52. 1823. *Sphaerella Wrangelii* Sommerfelt, *Mag. f. Naturvid.* 4: 252. 1824. *Protococcus kermesinus* Agardh, *Nova Acta Acad. Caes. Leop.-Car. Nat. Cur.* 12(2): 749. 1825. *Byssus kermesina* Wahlenberg, *Fl. Suecica* 2: 924. 1833. *Haematococcus kermesinus* Flomw, *Nova Acta Acad. Caes. Leop.-Car. Nat. Cur.* 20(2): 426. 1842. —Type from Sweden: "Lepr. Kermesina. Wr. Act. Holm." in herb. Agardh (LD) = primordia of CHLOROPHYCEAE (STIGEOCLONUM?).

Lichen roseus Schreber, *Spicil. f. Lips.*, p. 140. 1771. *Lepra rosea* Hoffman pro synon., *Enum. Lich.* 1: 5. 1784. *Byssus rosea* Retz, *Fl. Scand. Prodr.*, ed. al. p. 308. 1795. *Lepraria rosea* Acharius, *Lichenogr. Suec. Prodr.*, p. 9. 1798. *Tubercularia rosea* Persoon, *Syn. Meth. Fung.* 1: 114. 1810. *Palmella rosea* Lynghye, *Tent. Hydrphyt. Dan.*, p. 207. 1819. *Coccolithis rosea* Sprengel, *Linn. Syst. Veget.*, ed. 16, 4(1): 373. 1827. *Protococcus roseus* Corda in Sturm, *Deutschl. Fl.*, Abt. 2, 6: 37. 1833. *Microcystis rosea* Kützinger, *Linnaea* 8: 373. 1833. *Coccomphium cobaltinum* Link, *Handb. Erkenn. Gewächse* 3: 342. 1833. *Illosporium roseum* Link, *ibid.* 3: 488. 1833. *Haematococcus roseus* Meneghini, *Consp. Algol. Eugan.*, p. 323. 1837. *Protococcus cobaltinus* Rabenhorst, *Deutschl. Krypt.-Fl.* 2 (2): 11. 1847. —The original description is here designated as the temporary Type = FUNGI.

COCCOPHYSIUM Link, *Abb. K. Akad. Wiss. Berlin* 1824: 184. 1826. —Type species: *Lichen rubens* Hoffman, *Enum. Lich.* 1: 4. 1784. *Lepraria rubens* Acharius, *Meth. Lich.* 1: 6. 1803. *Monilia cinnabarina* Sprengel, *Fl. Halens.*, p. 386. 1806. *Globulina rubens* Turpin, *Dict. Sci. Nat.* 65(Végét. Acot.): pl. 6, fig. 7. 1816—29; Turpin, *Mém. Mus. d'Hist. Nat. Paris* 14: 26, 63. 1827.

- Conferva rubens* Sommerfelt, Suppl. Fl. Lappon., p. 194. 1826. *Protococcus rubens* Kürzing, Linnaea 8: 369. 1833. —The original description is here designated as the temporary Type = FUNGI.
- Limnodynion obscurum* Dickie, Journ. Linn. Soc. Bot. 18: 125. 1880. —Type from Brazil: Obydos, J. W. H. Trail, 6 Feb. 1874 (BM) = CHLOROPHYCEAE.
- LIMNODYNION** Kürzing in Roemer, Alg. Deutschbl., p. 61. 1845. —Type species: *L. Roemerianum* Kürzing in Roemer, loc. cit. 1845. *Palmogloia Roemeriana* Kürzing, Phyc. Germ., p. 153. 1845. *Protococcus infusionum* var. *Roemerianus* Hansgirg, Prodr. Algenfl. Böhmen 1: 143. 1886. —Type from Osterode, Germany: Römer 142 in herb. Kürzing (L) = EUGLENA sp. FIG. 344.
- LITHOMYXA** Howe, U. S. Geol. Surv. Prof. Paper 170: 63. 1932. —Type species: *L. calcigena* Howe, loc. cit. 1932. —Type from West Virginia: in Furnace creek, above Harpers Ferry, D. White, C. B. Read & M. A. Howe, 7 Dec. 1930 (NY) = FERROBACTERIACEAE.
- Lithomyxa calcigena* f. *ferriifera* Howe, U. S. Geol. Surv. Prof. Paper 170: 63. 1932. —Type from West Virginia: Furnace creek, above Harpers Ferry, D. White, C. B. Read & M. A. Howe, 7 Dec. 1930 (NY) = FERROBACTERIACEAE.
- Marssonella andicola* Tudin, Trans. Linn. Soc. London, ser. 3, 1(2): 200. 1940. —Type from Lake Titicaca, Bolivia: Lagunilla Lagunilla (BM) = CHARACIUM sp.
- Marssonella carpatana* Gonzalez Guerrero, Bol. R. Soc. Española Hist. Nat. 29: 251. 1929. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Merismopodia aeruginosa* b. *violacea* Rabenhorst, Fl. Eur. Algar. 2: 57. 1865. —Type from France: Falaise, de Brébisson (FC) = ERYTHROCONIS LITTORALIS Oerst.
- Merismopodia aurantiaca* Maggiora, Giorn. R. Soc. Ital. d'Igiene 2: 335. 1889. *Pedioscoccus Maggiorae* Trevisan in Saccardo, Syll. Fung. 8: 1051. 1889. —The original description is here designated at the Type = BACTERIA.
- Merismopodia chondroidea* Wittrock in Wittrock & Nordstedt, Alg. Exs. 4: 200. 1878. —Type from Sweden: ad Upsaliam in foete Slottsdammen, V. Wittrock, Jul. 1876 (in Witt. & Nordst., Alg. Exs. 200, S) = ERYTHROCONIS LITTORALIS Oerst.
- Merismopodia elegans* var. *mandalensis* Wille, Nyt Mag. Naturvid. 38(1): 5. 1900. —The original description is designated here as the temporary Type = ERYTHROCONIS LITTORALIS Oerst.
- Merismopodia Marssonii* Lemmermann, Ber. Deutsch. Bot. Ges. 18: 31. 1900. —The original description is here designated as the temporary Type = ERYTHROCONIS LITTORALIS Oerst.
- Merismopodia Maistrisii* Kufferath, Bull. Soc. Roy. Bot. Belg. 74: 95. 1942. —The original description is designated here as the temporary Type = ERYTHROCONIS LITTORALIS Oerst.
- Merismopodia ochracea* Mettenheimer, Abh. Senckenb. Naturf. Ges. 2: 141. 1856. *Lamprospedia ochracea* Trevisan in Saccardo, Syll. Fung. 8: 1049. 1889. —The original description is designated here as the temporary Type = ERYTHROCONIS LITTORALIS Oerst.
- Merismopodia punctata* var. *vacuolata* Playfair, Proc. Linn. Soc. New South Wales 43: 500. 1918. —The original description is designated here as the temporary Type = ERYTHROCONIS LITTORALIS Oerst.
- Merismopodia rectangularis* Schiller, Sitzungsber. Oesterr. Acad. Wiss., Math.-Nat. Kl., I, 163: 127. 1954. —The original description is here designated as the temporary Type = BACTERIA.
- Merismopodia Reichenbachii* Caspary, Schrift. Phys.-Ökon. Ges. Königsberg 15: 104. 1874. *Sarcina Reichenbachii* Winter, Rabenh. Krypt.-Fl. 1(1): 50. 1884. *Lamprospedia Reichenbachii* de Toni & Trevisan in Saccardo, Syll. Fung. 8: 1048. 1889. —Type from East Prussia: Presberg bei Goldap, R. Caspary, 22 Sept. 1874 (L) = ERYTHROCONIS LITTORALIS Oerst. FIG. 300.
- Merismopodia sinica* Ley, Bot. Bull. Acad. Sinica 1: 271. 1947. —The original description is here designated as the temporary Type = ERYTHROCONIS LITTORALIS Oerst.
- Merismopodia Trolleri* Bachmann, Zeitschr. f. Hydrol. 1: 350. 1920. —The original description is designated here as the temporary Type = ERYTHROCONIS LITTORALIS Oerst.
- Merismopodia violacea* Kürzing, Sp. Algar., p. 472. 1849. *Agmenellum violaceum* Brébisson pro synonym, in Kürzing, loc. cit. 1849. *Micraloa violacea* Brébisson pro synonym, in Rabenhorst, Fl. Eur. Algar. 2: 57. 1865. *Lamprospedia violacea* de Toni & Trevisan in Saccardo, Syll. Fung. 8: 1048. 1889. *Merismopodia aeruginosa* var. *violacea* Rabenhorst ex Forti, Syll. Myxophyc., p. 107. 1907. —Type from France: Falaise, Brébisson 532 (L) = ERYTHROCONIS LITTORALIS Oerst. FIG. 299.
- Micraloa Pini-turimorum* Biasoletto, Di Alc. Alghe Microsc., p. 48. 1832. *Microhaloa Pini* Kürzing, Tab. Phyc. 1: 9. 1846. *Micraloa Pini* Kürzing ex Trevisan, Sagg. Monogr. Alg. Coccot., p. 38. 1848. —Type from Trieste: Biasoletto (NY) = FLAGELLATES.
- MICRALOA** Biasoletto, Di Alc. Alghe Microsc., p. 44. 46. 1832. **SPHAEROTHROMBIUM** Kürzing pro synonym, Linnaea 8: 370. 1833. **CALIALOA** Trevisan, Sagg. Monogr. Alg. Coccot., p. 41. 1848. —Type species: *Micraloa protogenita* Biasoletto, Di Alc. Alghe Microsc., p. 44. 1832. *Microhaloa protogenita* Kürzing, Phyc. Germ., p. 147. 1845. *Calialoa Meneghinii* Trevisan, Sagg. Monogr. Alg. Coccot., p. 41. 1848. *Microcystis protogenita* Rabenhorst, Fl. Eur. Algar. 2: 51. 1865. *Chlorococcum protogenitum* Rabenhorst, ibid. 3: 58. 1868. *Protococcus protogenitus* Hansgirg, Prodr. Algenfl. Böhmen 1: 144. 1886. *Chroococcus protogenitus* Hansgirg, ibid. 2: 166. 1892. *Protococcus protogenitus* var. *minor* Forti, Syll. Myxophyc., p. 94. 1907. —Type from Trieste: Biasoletto (W) = FLAGELLATA.

Microloa rosea Kützing, Linnaea 8: 371. 1833. *Sphaerobrombium roseum* Kützing pro synon., ibid. 8: 370. 1833. *Cryptococcus roseus* Kützing, Phyc. Gener., p. 149. 1843; Kützing, Linnaea 17: 82. 1843. —Type from Germany: ad Charas putridas prope Tennstedt fl. Halens., Kützing, 1832 (L) = LAMPROCYSTIS ROSEA (Kütz.) Dr. & Daily, COMB. NOV.

Microloa ieres Flotow, Nova Acta Acad. Caes. Leop.-Car. Nat. Cur. 20(2): 456. 1842. —Topotype from Bohemia: Hirschberg, Flotow (in Rabenh. Alg. 71, FC) = PROTOCOCCUS GREVILLEI (Ag.) Crouan.

Microcystis argentea Schiller, Sitzungsber. Oesterr. Akad. Wiss., Math.-Nat. Kl., I, 163: 116. 1954. —The original description is here designated as the temporary Type = LAMPROCYSTIS ROSEA (Kütz.) Dr. & Daily.

Microcystis austriaca Kützing, Tab. Phyc. 1: 7. 1846. *Haematococcus austriacus* Trevisan, Sagg. Monogr. Alg. Coccot., p. 39. 1848. —Type from Austria: Welwitzsch (Sonder) (L) = EUGLENA sp.

Microcystis Brebissonii Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 85. 1843. *Bichatia Brebissonii* Trevisan, Nomencl. Algar. 1: 60. 1845. *Phytoconis miniata* Brébisson ex Trevisan, Sagg. Monogr. Alg. Coccot., p. 61. 1848. *Gloeocapsa paroliniana* β *Brebissonii* Kützing, Sp. Algar., p. 223. 1849. *Gloeocystis paroliniana* β *geumota* Brébisson in Rabenhorst, Fl. Eur. Algar. 3: 30. 1868. *Gloeocapsa paroliniana* var. *Brebissonii* Hansgirg, Prodr. Algenfl. Böhmen 2: 150. 1892. —Type from France: *Palmella miniata* Leibl. Falaises de la cote du Calvados, Brébisson (FI) = ASTEROCYSTIS ORNATA (Ag.) Hamel. FIG. 319.

Microcystis chroococcoides var. *minor* Nygaard, K. Danske Vidensk. Biol. Skr. 7(1): 178. 1949. —Type from Deomark: Sønderborg, 26 Aug. 1944 (in the slide collection of G. Nygaard) = BACTERIA (LAMPROCYSTIS sp.?).

Microcystis Donnellii Wolfe, Bull. Torrey Bot. Club 6: 282. 1879. —Type from Maryland: Garrett county, J. D. Smith, Jul. 1878 (PENN) = a ciliate PROTOZOAN containing ZOOCHLORELLA sp.

Microcystis lobata Dickie, Journ. Linn. Soc. Bot. 18: 128. 1880. —Type from the Rio Tapajás, Brazil: J. W. H. Trail 74 (BM) = ANABAENA CIRCINALIS (Kütz.) Rabenh.

Microcystis mellea Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 83. 1843. *Coccochloris mellea* Brébisson pro synon. in Meneghini, loc. cit. 1843. *Palmella mellea* Kützing, Phyc. Germ., p. 149. 1845. *Bichatia mellea* Trevisan, Nomencl. Algar. 1: 61. 1845. *Gloeocapsa mellea* Kützing, Tab. Phyc. 1: 18. 1846. *Cylindrocystis mellea* Brébisson pro synon. in Kützing, loc. cit. 1846. *Palmozoea monococca* β *mellea* Kützing, Sp. Algar., p. 229. 1849. *Gloeotheca mellea* Rabenhorst, Fl. Eur. Algar. 2: 62. 1865. *Chrootheca monococca* var. *mellea* Kützing ex Hansgirg, Prodr. Algenfl. Böhmen 2: 135. 1892. *Gloeotheca monococca* var. *mellea* Kützing ex Geider in Pascher, Süßwasserfl. 12: 94. 1925. —Paratypes from France: *Coccochloris mellea* Bréb. Falaise (FC, L, S, UC) = ASTEROCYSTIS ORNATA (Ag.) Hamel.

Microcystis merismopodigides Fritsch, Journ. Linn. Soc. Bot. 40: 332. 1912. —Type from the South Orkney islands: Point Martin, Scoria bay (in the collection of F. E. Fritsch) = BACTERIA.

Microcystis minor Kützing, Tab. Phyc. 1: 9. 1846. *Haematococcus minor* Trevisan, Sagg. Monogr. Alg. Coccot., p. 39. 1848. —Type from the Netherlands: Goes, van den Bosch (L) = EUGLENA sp. FIG. 318.

Microcystis minuta var. *violacea* Lindstedt, Fl. Mar. Cyanophyc. Schwed. Westküste, p. 17. 1943. —Type from Sweden: Kristineberg (in the collection of A. Lindstedt) = LAMPROCYSTIS ROSEA (Kütz.) Dr. & Daily. FIG. 316.

Microcystis olivacea Kützing, Phyc. Gener., p. 170. 1843. —Type from Germany: Jever, Jürgens (L) = EUGLENA sp. FIG. 320.

Microcystis parasitica Kützing, Phyc. Gener., p. 170. 1843. *Anacystis parasitica* Trevisan, Sagg. Monogr. Alg. Coccot., p. 35. 1848. *Microcystis pulverea* f. *parasitica* Elenkin, Monogr. Algar. Cyanophyc., Pars Spec. 1: 124. 1938. —Type from Germany (L) = NOSTOC HEDERULAE Menegh. FIG. 317.

Microcystis rosea Kufferath, Bull. Soc. Roy. Bot. Belg. 74: 94. 1942. —The original description is here designated as the Type = LAMPROCYSTIS ROSEA (Kütz.) Dr. & Daily.

Microcystis rulescens Martens ex Wille, Nyt Mag. Naturv. 62: 202. 1925. —Type from Atracan, Burma; co. 4819, in herb. Agardh (LD) = EUGLENA sp.

Microcystis stereophysalis Meneghini, Giorn. Bot. Ital. I, 1: 297. 1844. *Bichatia stereophysalis* Trevisan, Nomencl. Alg. 1: 62. 1845. *Tetraspora stereophysalis* Kützing, Tab. Phyc. 1: 20. 1846. —Type from Italy: Ferrara, Felisi (FI) = MONOSTROMA sp.

Microcystis umbrina Kützing, Linnaea 8: 373. 1833. *Protococcus umbrinus* Kützing, Phyc. Gener., p. 169. 1843. *Chlorococcum umbrinum* Rabenhorst, Fl. Eur. Algar. 3: 60. 1868. —Type from Germany: in cortice Fagi sylvaticae prope Leucopetram (in Kütz. Alg. Aq. Dulc. Dec. 10: 91, L) = PHYTOCONIS BOTRYOIDES (L.) Bory, somewhat parasitized.

MICRODISCUS Steinecke, Schröfl. Phys.-ökon. Ges. Königsberg 56: 25. 1916. —Type species: *M. parasitica* Steinecke, loc. cit. 1916. —The original description is here designated as the temporary Type = BACTERIA.

Microbaloa aurantiaca Kützing, Phyc. Germ., p. 147. 1845. *Microloa aurantiaca* Kützing ex

Trevisan, Sagg. Monogr. Alg. Coccoc., p. 38. 1848. —Type from Germany: Jever, Koch (L) = FLAGELLATES. FIG. 314.

MICROHALOA Kützling, Phyc. Gener., p. 169. 1843. —Type species: *M. botryoides* Kützling, loc. cit. 1843. *Micraloa botryoides* Kützling ex Trevisan, Sagg. Monogr. Alg. Coccoc., 38. 1848. *Cystococcus botryoides* Rabenhorst, Krypt.-Fl. Sachsen I: 137. 1863. *Chlorococcum botryoides* Rabenhorst, Fl. Eur. Algar. 3: 57. 1868. —Type from Germany: Nordhausen, Kützling (L) = PHYTOCOMIS BOTRYOIDES (L.) Bory. FIG. 313.

Microbaloa major Kützling in Desmazières, Pl. Crypt. Fr. 11: 534. 1858. —Type: Algier?, ex herb. Montagne (L) = encysted FLAGELLATES. FIG. 312.

Microbaloa pallida Kützling, Tab. Phyc. 1: 5. 1846. *Micraloa pallida* Kützling ex Trevisan, Sagg. Monogr. Alg. Coccoc., p. 37. 1848. —Type from France: Auromanches, herb. Lenormand (L) = EUDORINA ELEGANS Ehrenb. FIG. 315.

MONTANOA Gonzalez Guerrero, Anal. Jard. Bot. Madrid 8: 267. 1948. —Type species: *M. castellana* Gonzalez Guerrero, ibid. 8: 268. 1948. —The original description is here designated as the temporary Type = CALOTHRIX sp.

Myxobactron birundiforme G. S. West, Ann. So. Afr. Mus. 9: 63. 1911. *Dactylococcopsis birundiformis* Geitler, Rabenh. Krypt.-Fl. 14: 284. 1932. —Type from Angola: Mossamedes, Pearson (in the slide collection, BIRM) = ANKISTRODESMUS FALCATUS (Corda) Ralfs.

Myxobactron palatinum Schmidle, Allgem. Bot. Zeitschr. 1905: 65. 1906. *Dactylococcopsis rhabdoides* f. *longior* Geitler, Rabenh. Krypt.-Fl. 14: 282. 1932. —The original description is here designated as the temporary Type = DIATOMS.

MYXOBACTRON Schmidle, Hedwigia 43: 415. 1904. —Type species: *M. Usterianum* Schmidle, loc. cit. 1904. —Type from Negros island, Philippines: Urwald bei S. Carlos, A. Usteri 18 (ZT) = DIATOMS.

Myxosarcina burmensis Skuja, Nova Acta R. Soc. Sci. Upsal., ser. 4, 14(5): 21. 1949. —Type from Rangoon, Burma, L. P. Khanna 529 (in the collection of L. P. Khanna) = BACTERIA.

CHROOCOCCACEAE Subfam. EUCHROOCOCCACEAE Hansgirg, Prodr. Algenfl. Böhmen 2: 129. 1892. CHROOCOCCACEAE Subfam. EUCHROOCOCCACEAE Gruppe THECINEAE Hansgirg, loc. cit. 1892. —Type genus: ONCOBYRSA Agardh, Flora 10(2): 629. 1827. —Type species: *O. fluvialis* Agardh, loc. cit. 1827. *Cagniardia fluvialis* Trevisan, Sagg. Monogr. Alg. Coccoc., p. 51. 1848. —Type from Bohemia: Carlsbad, C. A. Agardh (LD) = FUNGI with spores. FIG. 348, 360.

PSEUDONCOBYRSA Geitler, Beih. z. Bot. Centralbl., II, 41: 237. 1925; in Pascher, Süßwasserfl. 12: 121. 1925. —Type species: *Oncobyrza lacustris* Schröter & Kirchner, Veget. des Bodensees, p. 102. 1896. *Pseudoncobyrsa lacustris* Geitler, Beih. z. Bot. Centralbl., II, 41: 237. 1925; in Pascher, Süßwasserfl. 12: 121. 1925. —The original description is here designated as the temporary Type = ASTEROCTYPS ORNATA (Ag.) Hamel.

Oncobyrza sparsa Rabenhorst, Fl. Eur. Algar. 2: 69. 1865. *Coccochloris sparsa* Brébisson pro synonym. in Rabenhorst, loc. cit. 1865. —The original description is here designated as the temporary Type = palmelloid STICHOCOCCUS SUBTILIS (Kütz.) Klerck.

ONKONEMA Geitler, Arch. f. Hydrobiol., Suppl. 12, 4: 627. 1933. —Type species: *O. compactum* Geitler, loc. cit. 1933. —Type from southern Sumatra: Ranau-See, 5 Feb. 1929 (slide no. RW2a in the collection of L. Geitler) = primordia of HAPLOSIPHON LAMINOSUS (Kütz.) Hansg.

Oscillatoria clavata Corda, Almanach de Carlsbad (C. J. de Carro, ed.) 6: 203. 1836. —The original description is here designated as the temporary Type = CLADOTHRUX sp.

Oscillatoria limnetica var. *acicularis* f. *brevis* Nygaard, K. Danske Vidensk. Selsk. Biol. Skr. 7(1): 191. 1949. *Dactylococcopsis inaequalis* Nygaard pro synonym., ibid. p. 192. 1949. —Type from Denmark: Molledamme i Søndborg, 26 Aug. 1944 (in the collection of G. Nygaard) = BACTERIA.

PAGEROGALA Wood, Smiths, Contrib. Knowl. 241: 81. 1872. —Type species: *P. stellio* Wood, ibid., p. 82. 1872. —The original description is here designated as the temporary Type = ANIMAL MATERIAL.

TRYPOTHALLUS Hooker f. & Harvey in Hooker, Bot. Antarct. Voy. Erebus & Terror 1839—43, 1(2): 500. 1847. —Type species: *Palmella anastomosans* Hooker f. & Harvey, London Journ. Bot. 4: 298. 1845. *Trypethallus anastomosans* Hooker f. & Harvey, Bot. Antarct. Voy. Erebus & Terror 1839—43, 1(2): 500. 1847. *Palmodiclyon Hookeri* Kützling, Sp. Algar., p. 234. 1849. *Gloiodiclyon anastomosans* de Toni, Syll. Algar. 2: 653. 1889. —Type from Kerguelen island: moist caves near the sea, Christmas Harbour, no. 700, May 1840 (K) = primordia of PRASIOLA sp.

Palmella aurantia Agardh, Syst. Algar., p. 14. 1824. *Coccochloris aurantia* Wallroth, Fl. Crypt. Germ. 2: 6. 1833. *Cogniardia aurantia* Trevisan, Sagg. Monogr. Alg. Coccoc., p. 49. 1848. *Aphanoceps aurantia* Rabenhorst, Fl. Eur. Algar. 2: 51. 1863. *Chroococcus aurantiacus* Wille, Nyt Mag. Naturvid. 56(1): 50. 1918. *Schizochlamys aurantia* Drouet & Daily, Lloydia 11: 79. 1948. —Type from Sweden: Traneberg, 30 Jul. 1823, herb. Agardh (LD) = SCHIZOCHLAMYS AURANTIA (Ag.) Dr. & Daily. FIG. 361.

Palmella cylindrica Lyngbye, Tent. Hydrophyt. Dan., p. 205. 1819. *Coccochloris cylindrica* Brébisson in Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5(Sci. Fis. & Mat.): 46, 68. 1843.

—The original description is here designated as the temporary Type = CHLOROPHYCEAE.

CYLINDROCYSTIS Meneghini, Cenni sulla Organogr. & Fisiol. d. Alg., p. 5, 26. 1838. —Type species: *Palmella cylindrospora* Brébisson in Brébisson & Godey, Mém. Soc. Acad. Sci., Art. & Belles-Lettres Falaise 1835: 256. 1836. *Cylindrocystis Brébissonii* Meneghini, Cenni sulla Organogr. & Fisiol. d. Alg., p. 5. 1838; in Desmazières, Pl. Crypt. Fr., ed. 2, no. 914. 1838. *Palmogloia Brébissonii* Kützing, Tab. Phyc. 1: 19. 1846. *P. Meneghinii* Kützing loc. cit. 1846. *Penium Brébissonii* Ralfs, Brit. Desmid., p. 153. 1848. *Cylindrocystis cylindrospora* Drouet & Daily, Leaff. Acadian Biol. 1: 16. 1953. —Type from France: Falaise, ex herb. Lenormand (FI) = CYLINDROCYSTIS CYLINDROSPORA (Bréb.) Dr. & Daily.

Palmella depressa Berkeley, Glean. Brit. Alg., p. 19. 1833. *Coccochloris depressa* Menegh., Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 46, 68. 1843. *Aphanocapsa depressa* Rabenhorst, Fl. Eur. Algar. 2: 51. 1865. —Type from England: "Palmella depressa", herb. Berkeley (K) = palmelloid plants of STIGEOCLONIUM sp.

Palmella effusa Kützing, Linnæa 8: 375. 1833. —Type from Germany: im Bruchteiche prope Tennaestadt, with *Oscillatoria alba*, F. T. Kützing (FC) = BACTERIA.

Palmella flava Kützing, Tab. Phyc., 1: 9. 1846. *Cagniardia flava* Trevisan, Sagg. Monogr. Alg. Coccor., p. 49. 1848. *Aphanocapsa flava* Rabenhorst, Fl. Eur. Algar. 2: 50. 1865. —Type from France: Vire, herb. Lenormand (L) = EUDORINA ELEGANS Ehrenb. FIG. 349.

Palmella fusiformis Roemer, Alg. Deutschl., p. 64. 1845. *P. fusiformis* Rabenhorst, Deutschl. Krypt.-Fl. 2: 60. 1847. *Cagniardia fusiformis* Trevisan, Sagg. Monogr. Alg. Coccor., p. 50. 1848. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.

Palmella gigantea Sommerfelt, Suppl. Fl. Lappon., p. 203. 1826. —Type from Norway: *Palmella gigantea*. E. Norveg. Sommerf. (C) = ZOOCHLORELLA PARASITICA Brande in OPHRYDIUM sp.

Palmella globosa Agardh, Syst. Algar., p. 13. 1824. *Coccochloris globosa* Crouan fr., Fl. Finistère, p. 110. 1867. —Type from Sweden: "Palmella globosa" (LD) = ZOOCHLORELLA PARASITICA Brandt in OPHRYDIUM sp.

Palmella heterospora Rabenhorst, Krypt.-Fl. Sachsen 1: 129. 1863. —Isotypes from Germany in Rabenh. Alg. Sachs. 970 (FC, FI, L, TA) = STICHOCOCCUS BACILLARIS Näg.

Palmella hormospora Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 52. 1843. *Phytoconis hormospora* Trevisan, Prosp. Fl. Eugau., p. 57. 1843. *Cagniardia hormospora* Trevisan, Sagg. Monogr. Alg. Coccor., p. 48. 1848. —Type from Italy: "Palmella hormospora" (FI) = NOSTOC HUMIFUSUM Carm. FIG. 356.

HOMALOCOCCUS Kützing, Oster-Progr. Realsch. Nordhausen, p. 6. 1863; Hedwigia 2: 86. 1863. —Type species: *Palmella hyalina* Lyngbye, Tent. Hydrophyt. Dan., p. 204. 1819. *Coccochloris hyalina* Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 46, 66. 1843. *Cagniardia Kuetzingiana* Trevisan, Sagg. Monogr. Alg. Coccor., p. 50. 1848. *Cbaos hyalinus* Bory ex Trevisan, ibid., p. 56. 1848. *Homalococcus Hassallii* Kützing, Oster-Progr. Realsch. Nordhausen, p. 6. 1863; Hedwigia 2: 86. 1863. *Aphanotheca hyalina* A. Braun ex Hansgirt, Prodr. Algenfl. Böhmen 2: 159. 1892. —Type from Faeröer islands: in fossis rivuli ad Thorshavn, 26 Jun. 1817 (C) = TETRASPORA GELATINOSA (Vauch.) Desv.

Palmella miniata Leiblein, Flora 13(1): 338. 1830. *Merrettia miniata* Trevisan, Sagg. Monogr. Alg. Coccor., p. 46. 1848. *Prolococcus viridis* var. *miniatus* Wolle, Fresh-w. Alg. U. S., p. 181. 1887. —Type from Germany: aus einem Sümpfe, Würzburg, Leiblein, 12 Mar. 1827 (L) = encysted FLAGELLATES.

PALMELLA Unterartung *TETRATOCE* Nägeli, Die Neuern Algensyst., p. 131. 1847. —Type species: *Palmella aequalis* Nägeli in Kützing, Sp. Algar., p. 212. 1849. *P. miniata* var. *aequalis* Nägeli, Gatt. Einzeln. Alg., p. 67. 1849. *Palmella miniata* b. *aequalis* Nägeli ex Rabenhorst, Fl. Eur. Algar. 3: 34. 1868. *Aphanocapsa aequalis* Hansgirt, Prodr. Algenfl. Böhmen 2: 158. 1892. —Type from Switzerland: feuchte Felsen, Zürich, Nägeli 307 (L) = CHLOROPHYCEAE (TETRASPORA sp?).

Palmella minuta Agardh, Flora 10(2): 630. 1827. *Coccochloris minuta* Wallroth, Fl. Crypt. Germ. 2: 5. 1833. *Anacystis minuta* Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 47, 94. 1843. *Cagniardia minuta* Trevisan, Sagg. Monogr. Alg. Coccor., p. 50. 1848. *Aphanotheca minuta* Migula, Krypt.-Fl. Deutschl., II, Alg. la: 35. 1905. —Type from Bohemia: Carlsbad, herb. Agardh (LD) = STICHOCOCCUS SUBTILIS (Kütz.) Klerck.

Palmella mirifica Rabenhorst, Algen Sachs. 55—56: 541. 1856. —Type from Germany: Dresden, H. Richter, 1856 (Rabenh. Alg. Sachs. 541, L) = BACTERIA.

PALMELLA Unterartung *DITOCE* Nägeli, Die Neuern Algensyst., p. 131. 1847. —Type species: *Palmella mucosa* Kützing, Phyc. Gener., p. 172. 1843. *Merrettia mucosa* Trevisan, Sagg. Monogr. Alg. Coccor., p. 46. 1848. —Type from Germany: in saxis rivulorum (Zorge), Nordhausen, Kützing, 1 Mar. 1841 (L) = young TETRASPORA GELATINOSA (Vauch.) Desv.

Palmella parvula Kützing, Phyc. Gener., p. 171. 1843. *Cagniardia parvula* Trevisan, Sagg. Monogr. Alg. Coccor., p. 50. 1848. —Type from Germany: Nordhausen, Kützing (L) = PALMO-DICTYON VIRIDIS Kütz. FIG. 362.

Palmella pellucidissima Bory in Mougeot & Roumeguère in Louis, Départ. des Vosges, Alg., p. 35 (of reprint). 1887. —Type from France: in lignis aqua immersis rivulorum circa Retournemer, Vosges, May 1822 (L) = FLAGELLATA.

Palmella pila Suhr, Flora 23(1): 297. 1840. *Coccobloris pila* Kützinger, Phyc. Germ., p. 150. 1845. —Type from Germany: an der Eider, Suhr (L) = ZOOCHLORELLA PARASITICA Brandt in OPHRYDIUM sp.

Palmella rubescens Brébisson in Brébisson & Godey, Mém. Soc. Acad. Sci., Art. & Belles-Lettres 1835: 256. 1836. *Microcystis rubescens* Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 47, 86. 1843. *Coccobloris rubescens* Brébisson pro synonym. in Meneghini, loc. cit. 1843. *Bicbatia rubescens* Trevisan, Nomencl. Algar. 1: 62. 1845. *Palmogloea rubescens* Kützinger, Tab. Phyc. 1: 19. 1846. *Cagniardia Brébissonii* Trevisan, Sagg. Monogr. Alg. Coccot., p. 49. 1848. *Mesotaenium rubescens* Drouet & Daily in Drouet, Proc. Minnesota Acad. Sci. 22: 136. 1956. —Type from France: Falaise, A. de Brébisson (L) = MESOTAENIUM RUBESCENS (Bréb.) Dr. & Daily.

Palmella terminalis Agardh, Icon. Algar. Eur. 14. 1828—35. *Coccobloris terminalis* Brébisson in Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 46, 67. 1843. *C. iberialis* Rabenhorst, Deutschl. Krypt.-Fl. 2(2): 60. 1847. —Type labeled "Sept. 1825" in herb. Agardh (LD) = TETRASPORA GELATINOSA (Vauch.) Desv.

Palmella uvaeformis Kützinger, Alg. Aq. Dulc. Dec. 11: 102. 1834. *Cagniardia uvaeformis* Trevisan, Sagg. Monogr. Alg. Coccot., p. 50. 1848. *Palmella parvibilis* Suhr pro synonym. ex Kützinger, Sp. Algar., p. 211. 1849. —Type from Germany: Eilenburg (L) = primordia of CHLOROPHYCEAE.

Palmogloea aureo-nucleata Brébisson in Rabenhorst, Alg. Eur. 218—220: 2190. 1870. —Type from France: in paludibus turfosis, Falaise, Brébisson (in Rabenh. Alg. 2190, L) = ASTEROCYTIS ORNATA (Ag.) Hamel.

Palmogloea crassa Kützinger, Tab. Phyc. 1: 19. 1846. —Type from Germany: Oberharz, herb. Kützinger (L) = MESOTAENIUM RUBESCENS (Bréb.) Dr. & Daily.

Palmogloea dimorpha Kützinger, Sp. Algar., p. 229. 1849. *Coccobloris macrocarpa* Brébisson pro synonym. in Kützinger, loc. cit. 1849. —Type from France: mousses humides, Falaise (L) = MESOTAENIUM RUBESCENS (Bréb.) Dr. & Daily.

TRICHOCYSTIS Kützinger, Tab. Phyc. 1: 20. 1846. —Type species: *Palmogloea gigantea* Kützinger, Bot. Zeitung 5: 221. 1847. *Trichocystis gigantea* Kützinger, Tab. Phyc. 1: 20. 1846. —Type from Germany: Tolkwade bei Schleswig, Suhr, Apr. 1840 (L) = ZOOCHLORELLA PARASITICA Brandt in OPHRYDIUM sp. FIG. 364.

Palmogloea lurida Flotow in Kützinger, Tab. Phyc. 1: 20. 1846. —Type from Sudetenland, Bohemia: unweit der Gibraltar-felsen, Flotow, 8 Jun. 1844 (L) = MESOTAENIUM RUBESCENS (Bréb.) Dr. & Daily.

Palmogloea macrococca Kützinger, Phyc. Germ., p. 153. 1845. *Mesotaenium Braunii* de Bary, Unters. Fam. Conjugat., p. 74. 1858. *M. macrococcum* Kützinger ex Roy (& Biser), Ann. Scott. Nat. Hist. 1894: 253. 1894. —Type from Germany: Oberharz, herb. Kützinger (L) = MESOTAENIUM RUBESCENS (Bréb.) Dr. & Daily.

Palmogloea micrococca Kützinger, Tab. Phyc. 1: 20. 1846. *Mesotaenium macrococcum* var. *micrococcum* Kirchner ex W. & G. S. West, Trans. Yorkshire Nat. Union 5: 41. 1900. —Type from France: Vire, Lenormand (L) = palmeloid BOTRYDIUM GRANULATUM (L.) Grev.

Palmogloea rupestris Kützinger, Phyc. Germ., p. 153. 1845. *Polycoccus marginatus* Kützinger in Roemer, Alg. Deutschl., p. 65. 1845. —Type from Germany: Römer 105 (L) = MESOTAENIUM RUBESCENS (Bréb.) Dr. & Daily.

PARACAPSA Naumann, Ark. f. Bot. 18(21): 6. 1924. —Type species: *P. siderophila* Naumann, loc. cit. 1924. *Pseudonocobrysa siderophila* Geitler, Beih. z. Bot. Centralbl., II, 41: 237. 1925; in Pascher, Süßwasserfl. 12: 122. 1925. —Topotype, here designated as the Type, from Sweden: Förhultsjön, Aneboða, G. Israelsson, 2 Jul. 1928 (S) = CAPSOSIRA BRÉBISSONII Kütz.

PAULINELLA Lauterborn, Zeitschr. f. Wiss. Zool. 59: 537, 543. 1895. —Type species: *P. chromatophora* Lauterborn, loc. cit. 1895. —The original description is here designated as the temporary Type = RHIZOPODA.

PELLAINA Pascher, Jahrb. f. Wiss. Bot. 71(3): 458. 1929. —Type species: *P. cyanea* Pascher, ibid., p. 459. 1929. —The original description is here designated as the temporary Type = FLAGELLATES.

PILGERIA Schmidle, Hedwigia 40: 53. 1901. —Type species: *P. brasiliensis* Schmidle, ibid., p. 54. 1901. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.

Placoma corticatis Sbousboe ex Bornet, Mém. Soc. Nat. Sci. Nat. & Math. Cherbourg 28: 241. 1892. —Published as a synonym of *RALFSLIA VERRUCOSA* Aresch.

Placoma fusca Sbousboe ex Bornet, Mém. Soc. Nat. Sci. Nat. & Math. Cherbourg 28: 241. 1892. —Published as a synonym of *RALFSLIA VERRUCOSA* Aresch.

Placoma lapidea Sbousboe ex Bornet, Mém. Soc. Nat. Sci. Nat. & Math. Cherbourg 28: 347. 1892. —Published as a synonym of *HILDBRANDTIA PROTOTYPUS* Nardo.

Placoma membranacea Sbousboe ex Bornet, Mém. Soc. Nat. Sci. Nat. & Math. Cherbourg 28: 231. 1892. —Published as a synonym of *ZANARDINIA COLLARIS* (Ag.) Crouan fr.

- Pleurocapsa parenchymatica* Geitler, Arch. f. Hydrobiol., Suppl. XII, 4: 626. 1933. *Scopulonema parenchymaticum* Geitler in Engler & Prantl, Natürl. Pflanzenfam., ed. 2, 1b: 93. 1942. —Type from central Java: Seraja unterhalb Patagbanteng, Ruimer, 5 Jun. 1929 (slide no. D6aα in the collection of L. Geitler) = young LICHEN.
- Pleurocapsa Usteriana* Schmidle, Hedwigia 43: 414. 1904. —Type from Java: in einem kleinen Wasserfall, Diopund, A. Usteri 43, 9 May 1903 (ZT) = young TETRASPORACEAE.
- Pleurococcus angulosus* var. *irregularis* Hansgirg, Prodr. Algenfl. Böhmen 1(2): 237. 1888. —Type from Bohemia: Plans nächst Tabor, A. Hansgirg, 4 May 1886 (W) = FLAGELLATES.
- Pleurococcus angulosus* f. *lectorum* Trevisan ex Kirchner, Krypt.-Fl. Schlesien 2(1): 115. 1878. —The original description is here designated as the temporary Type = STICHOCOCCUS SUBTILIS (Kütz.) Klerck.
- Pleurococcus antarcticus* W. & G. S. West, Brir. Antarct. Exped., 1907—09, 1: 276. 1911. *P. antarcticus* f. *simplex* Fritsch, Nat. Antarct. Exped. (1901—04), Nat. Hist. 6(Freshw. Alg.): 14. 1912. *Protococcus antarcticus* G. S. West, Journ. of Bot. 54: 2. 1916. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus antarcticus* f. *filamentosus* Fritsch, Nat. Antarct. Exped. (1901—04), Nat. Hist. 6(Freshw. Alg.): 14. 1912. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus antarcticus* f. *minor* Fritsch, Nat. Antarct. Exped. (1901—04), Nat. Hist. 6(Freshw. Alg.): 14. 1912. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus antarcticus* f. *robustus* W. & G. S. West, Brir. Antarct. Exped., 1907—09, 1: 276. 1911. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus antarcticus* f. *stellatus* Fritsch, Nat. Antarct. Exped. (1901—04), Nat. Hist. 6(Freshw. Alg.): 14. 1912. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus antarcticus* f. *typicus* Fritsch, Nat. Antarct. Exped. (1901—04), Nat. Hist. 6(Freshw. Alg.): 13. 1912. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus aquaticus* Snow, Bull. U. S. Fish Comm. 1902: 383. 1903. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus Beigelii* Kuchenmeister & Rabenhorst, Hedwigia, 1867: 49. 1867. *Hyalococcus Beigelii* Schröter, Pilze Schlesiens 1: 152. 1886. —Type from England: an Chignon-Haaren, London, Dr. Beigel (in Rabenh. Alg. Eur. 2053, NY) = BACTERIA.
- CYANODERMA Weber-van Bosse, Natuurk. Verh. Holl. Maatsch. Wetensch. Haarlem, ser. 3, 5: 18. 1887. CYANODERMA Subgenus EUCYANODERMA Hansgirg, Notarisia 3: 588. 1888. —Type species: *Pleurococcus Bradypis* Kuhn in Welcker, Abh. Naturf. Ges. Halle 9: 66. 1866. *Cyanoderma Bradypodis* Weber-van Bosse, Natuurk. Verh. Holl. Maatsch. Wetensch. Haarlem, ser. 3, 5: 18. 1887. *Pleurocapsa Bradypodis* Hansgirg, Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl., 1890(2): 92. 1890. —The original description is here designated as the temporary Type = RHODOPHYCEAE.
- Pleurococcus calcarinus* Boye Petersen, K. Dansk. Vidensk. Selsk. Skr., 7(Naturv.-Math. Afd.), 12: 320. 1916. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus Choleopis* Kuhn in Welcker, Abh. Naturf. Ges. Halle 9: 66. 1866. *Cyanoderma Choleopodis* Weber-van Bosse, Natuurk. Verh. Holl. Maatsch. Wetensch. Haarlem, ser. 3, 5: 18. 1887. *Pleurocapsa Choleopodis* Hansgirg, Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl., 1890(2): 91. 1890. —The original description is here designated as the temporary Type = RHODOPHYCEAE.
- Pleurococcus cinnamomeus* Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5(Sci. Fis. & Mat.): 42. 1843. *Protococcus cinnamomeus* Kütz., Tab. Phyc. 1: 5. 1846. *Chroococcus cinnamomeus* Rabenhorst, Krypt.-Fl. Sachsen 1: 70. 1863. —Type from Italy: in olis seminarii (Padova), Jul. 1839, herb. Meneghini (FI) = PROTOSIPHON CINNAMOMEUS (Menegh.) Dr. & Daily, COMB. NOV.
- Pleurococcus conglomeratus* Artari, Bull. Soc. Imp. Nat. Moscou, N. S., 6: 244. 1893. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus crenulatus* Hansgirg, Oesterr. Bot. Zeitschr. 36: 110. 1886. —Type from Bohemia: Veseli, A. Hansgirg, Aug. 1884(W) = STICHOCOCCUS SUBTILIS (Kütz.) Klerck. FIG. 335.
- Pleurococcus ellipticus* Meneghini, Conspectus Algal. Eugan., p. 338. 1837. *Protococcus ellipticus* Kütz., Sp. Algar., p. 198. 1849. —Type from the Eusean springs, Italy: "Pleurococcus ellipticus", Meneghini (FI) = CYLINDROSPERMUM MUSCICOLA Kütz., spores.
- Pleurococcus frigidus* W. & G. S. West, Brir. Antarct. Exped., 1907—09, 1: 276. 1911. *Protococcus frigidus* G. S. West, Journ. of Bot. 54: 2. 1916. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus Koestitzii* Fritsch, Nat. Antarct. Exped. (1901—04), Nat. Hist. 6(Freshw. Alg.):

15. 1912. *Chlorella Koellizii* Wille, Deutsche Südpolar-Exped., 1901—03, 8: 401. 1928. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus marinus* Collins, Rhodora 9: 197. 1907. —Type from Maïoe: in a marsh pool, Stovers point, Harpswell, F. S. Collins, 16 Jul. 1906 (in Coll., Hold. & Seich., Phyc. Bot.-Amer. 1316, NY) = CHLOROPHYCEAE.
- Pleurococcus marinus* Hansgirg in Foslie, Mar. Alg. Norway 1: 158. 1890. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus marinus* f. *major* Hansgirg in Foslie, Mar. Alg. Norway 1: 158. 1890. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus minutus* var. *juvencens* Hansgirg, Physiol. & Algol. Stud., p. 87. 1887. —Type from Bohemia: Horrus Kinsky, Smichov, A. Hansgirg, Oct. 1883 (W) = FLAGELLATES. FIG. 336.
- Pleurococcus minutus* var. *roseolus* Hansgirg, Prodr. Algenfl. Böhmen 1(2): 134. 1888. —Type from Bohemia: Libsic, A. Hansgirg, Aug. 1886 (W) = FLAGELLATES. FIG. 337.
- Pleurococcus monestarii* Reinsch, Flora 67: 176. 1884. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus nimbatus* de Wildeman, Notarisia 1893: 7. 1893. *Tetracoccus Wildemanii* Schmidle, Flora 78: 45. 1894. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus pachydermus* Lagerheim in Wittrock & Nordstedt, Alg. Exs. 9: 447. 1882. *Protococcus pachydermus* G. S. West, Journ. of Bot. 54: 2. 1916. —Type from Sweden: ad Bellevue prope Holmiam, G. Lagerheim, Jun. 1881 (in Wittrock & Nordstedt, Alg. Exs. 447, L) = PHYTOCONIS BOTRYOIDES (L.) Bory, parasitized in part. FIG. 338.
- Pleurococcus pachydermus* f. *striatus* W. & G. S. West, Brit. Antarct. Exped., 1907—09, 1: 275. 1911. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus pulcher* Kirchner, Jahresh. Ver. Vaterl. Naturk. Württemberg 36: 170. 1880. *Protococcus viridis* f. *pulcher* Hansgirg in Wittrock & Nordstedt, Alg. exs. 15: 721. 1886. *P. viridis* var. *pulcher* Hansgirg, Prodr. Algenfl. Böhmen 1: 141. 1886. —The original description is here designated as the temporary Type = SCHIZOGONIUM MURALE Kütz.
- Pleurococcus regularis* Artari, Bull. Soc. Imp. Nat. Moscou, N. S., 6: 245. 1893. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus rufescens* var. *sanguineus* W. & G. S. West, Journ. of Bot. 36: 336. 1898. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus serialis* Wood, Smiths. Contrib. Knowl. 241: 78. 1872. —The original description is here designated as the temporary Type = PROTOSIPHON CINNAMOMEUS (Menegh.) Dr. & Daily.
- Pleurococcus simplex* Artari, Bull. Soc. Imp. Nat. Moscou, N. S., 6: 243. 1893. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus superbus* Cienkowski, Bot. Zeitung 23: 21. 1865. —The original description is here designated as the temporary Type = encysted FLAGELLATES.
- Pleurococcus tectorum* f. *antarcticus* Wille, Deutsche Südpolar-Exped., 1901—03, 8: 398. 1928. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus vestitus* Reinsch, Algenfl. Mitt. Tb. Franken, p. 56. 1867. *Protococcus viridis* var. *vestitus* Wille, Fresh-w. Alg. U. S., p. 183. 1887. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus vestitus* f. *chlorophyllaceus* Lagerheim, Öfvers. K. Sv. Vet.-Akad. Förh. 1882(2): 79. 1882. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus vulgaris* f. *cobaerens* Wittrock in Lagerheim Öfvers. K. Sv. Vet.-Akad. Förh. 40(2): 59. 1883. *P. vulgaris* var. *cobaerens* Wittrock ex Hansgirg, Prodr. Algenfl. Böhmen 1: 133. 1886. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- Pleurococcus vulgaris* f. *glomeratus* Hansgirg, Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl., 1891(1): 320. 1891. —Type from Dalmatia: Cannosa nächst Ragusa, A. Hansgirg, 1891 (W) = primordia of STIGEOCLONIUM sp. FIG. 339.
- Pleurococcus vulgaris* f. *minor* Rabenhorst ex Kirchner, Krypt.-Fl. Schlesien 2(1): 115. 1878. —The original description is here designated as the temporary Type = STICHOCOCCUS SUBTILIS (Kütz.) Klerck.
- Polycoccus incidus* Roemer, Alg. Deutschl., p. 65. 1845. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.
- POLYCOCCUS* Kützling, Phyc. Germ., p. 148. 1845. —Type species: *Polycoccus punctiformis* Kützling, Naturk. Verh. Holl. Maatsch. Wetensch. Haarlem, p. 67. 1841. *Microcystis punctiformis* Kirchner, Krypt.-Fl. Schlesien 2(1): 256. 1878. —Type from Germany: Nordhausen, F. T. Kützling (ZT) = NOSTOC sp., parasitized in part.
- Polycystis marginata* var. *minor* Hansgirg, Prodr. Algenfl. Böhmen 2: 145. 1892. *Microcystis marginata* var. *minor* Hansgirg ex Forti, Syll. Myxophyc., p. 91. 1907. —Type from Bohemia: Ouzic nächst Kralup, A. Hansgirg, Oct. 1883 (W) = LAMPROCYSTIS ROSEA (Kütz.) Dr. & Daily.
- Polycystis violacea* Izigsohn in Rabenhorst, Alg. Sachs. 31 & 32: 306. 1853. *P. purpurascens* A. Braun ex Rabenhorst, Krypt.-Fl. Sachsen 1: 74. 1863. *Aphanothece purpurascens* A. Braun pro

synon. in Rabenhorst, loc. cit. 1863. *Microbalos jodes* Itzigsohn *pro synonym.* in Rabenhorst, loc. cit. 1863. *Polycystis ichthyoblaba* b. *purpurascens* A. Braun ex Rabenhorst Fl. Eur. Algar. 2: 53. 1865. *Microcystis ichthyoblaba* var. *purpurascens* A. Braun ex Forst, Syll. Myxophyc., p. 89. 1907. —Type from Germany: im Rehwinkel, Itzigsohn, Aug. 1852 (in Rabenb. Algen 306, B) = BACTERIA. FIG. 352.

Porphyridium aurugineum Geitler, Oesterr. Bot. Zeitschr. 72: 84. 1923. —The original description is here designated as the temporary Type = *P. CRUENTUM* (Sm. & Sow.) Näg.

Porphyridium magnificum Wood, Proc. Amer. Philos. Soc. 11: 144. 1869. —Type from Texas (UC) = *P. CRUENTUM* (Sm. & Sow.) Näg.

RHODOPLAX Schmidle & Wellheim, Bull. Herb. Boiss., ser. 2, 1: 1012. 1901. —Type species: *Porphyridium Schinzii* Schmidle, Beih. z. Bot. Centralbl. 10: 180. 1901. *Rhodoplax Schinzii* Schmidle & Wellheim, Bull. Herb. Boiss., ser. 2, 1: 1012. 1901. —Type from the Rheinfall at Schaffhausen, Switzerland (slides in the collection of G. Schmidle, ZT) = primordia of CHANTRANSIA (BATRACHOSPERMUM?) sp.

Porphyridium sordidum Geitler, Arch. f. Protistenk. 76: 595. 1932. —The original description is here designated as the temporary Type = *P. CRUENTUM* (Sm. & Sow.) Näg.

Porphyridium Witrockii Richter in Witrock & Nordstedt, Alg. Exs. 9: 440. 1882. *P. cruentum* β *Witrockii* Hansgirg, Oesterr. Bot. Zeitschr. 35: 315. 1884. *Aphanocapsa Witrockii* Hansgirg, Bot. Centralbl. 22: 34. 1885. *A. cruenta* var. *Witrockii* Hansgirg, Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl., 1890(2): 138. 1891. *A. cruenta* b. *Witrockii* Hansgirg, Prodr. Algenfl. Böhmen 2: 155. 1892. —Isotype from Germany: Anger prope Lipsiam, P. Richter, 29 Nov. 1881 (in Witrock & Nordstedt, Alg. Exs. 440 (FC) = PORPHYRIDIUM CRUENTUM (Sm. & Sow.) Näg.

Protococcus angulosus Corda in Sturm, Deutschlands Fl., II, 6: 41. 1833. *Microcystis angulosa* Kützling, Linnaea 8: 374. 1833. *Pleurococcus angulosus* Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5(Sci. Fis. & Mat.): 10, 37. 1843. *P. Meneghini* Brébisson *pro synonym.* in Meneghini, loc. cit. 1843. *P. angulosus* f. *palustris* Kützling ex Kirchner, Krypt.-Fl. Schlesien 2(1): 115. 1878. *Protococcus viridis* var. *angulosus* Wolle, Fresh-w. Alg. U. S., p. 181. 1887. *Pleurococcus angulosus* a. *palustris* Kirchner ex Hansgirg, Prodr. Algenfl. Böhmen 1: 134. 1886. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.

Protococcus annulatus Pascher, Süßwasserfl. 5(Chlorophyc. 2): 226. 1915. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.

Protococcus atlanticus Montagne, Ann. Sci. Nat. III. Bot. 6: 267. 1846. *Sphaerella atlantica* Lemmermann, Abb. Nat. Ver. Bremen 17: 345. 1903. —Type from the Atlantic ocean, off Portugal: inter promontoria Spichel et la Rocca, Turrell & de Freycinet (PC) = FLAGELLATES.

Protococcus aurantio-luteus Kützling, Phyc. Germ., p. 146. 1845. *Chroococcus aurantio-luteus* Rabenhorst, Fl. Eur. Algar. 2: 34. 1865. —Type from Bohemia: ad parietes in caldariis horti Pragenses, ex herb. Meneghini (L) = encysted FLAGELLATES.

Protococcus aureo-viridis Kützling, Phyc. Germ., p. 146. 1845. *Chroococcus aureo-viridis* Rabenhorst, Krypt.-Fl. Sachsen 1: 70. 1863. *Pleurococcus aureo-viridis* Rabenhorst, Fl. Eur. Algar. 3: 26. 1868. —Type from Germany: Nordhausen, herb. Kützling (L) = primordia of CHLOROPHYCEAE.

Protococcus aureus Kützling, Tab. Phyc. 1: 3. 1846. *Protosphaeria aurea* Trevisan, Sagg. Monogr. Alg. Coccol., p. 29. 1848. *Chroococcus aureus* Rabenhorst, Krypt.-Fl. Sachsen 1: 70. 1863. *C. macrococcus* f. *aureus* Rabenhorst, Fl. Eur. Algar. 2: 33. 1865. *C. macrococcus* var. *aureus* Rabenhorst ex Hansgirg, Prodr. Algenfl. Böhmen 2: 160. 1892. —Type from Bohemia: Hirschberg, v. Flotow 3, 1841 (L) = FLAGELLATES.

STICHOCOCCUS Nägeli, Gatt. Einzell. Alg., p. 76. 1849. —Type species: *Protococcus bacillaris* Nägeli in Kützling, Sp. Algar., p. 198. 1849. *Stichococcus bacillaris* Nägeli, Gatt. Einzell. Alg., p. 77. 1849. *Ulothrix bacillaris* Forest, Handb. Alg., p. 72. 1954. —The original description is here designated as the temporary Type = STICHOCOCCUS BACILLARIS Näg.

PROTOSIPHON Klebs, Beding. d. Fortpfl. b. Einig. Alg. & Pilz., p. 221. 1896. —Type species: *Protococcus botryoides* Kützling, Tab. Phyc. 1: 2. 1846. *Protosiphon botryoides* Klebs, Beding. d. Fortpfl. b. Einig. Alg. & Pilz., p. 222. 1896. —Type from Germany: Nordhausen, P. T. Kützling (L) = F. CINNAMOMBUS (Menegh.) Dr. & Daily.

CYANIDIUM Geitler, Arch. f. Hydrobiol., Suppl. XII, 4: 624. 1933. *PLUTO* Copeland ex Drouet, Amer. Midl. Nat. 30: 672. 1943. —Type species: *Protococcus botryoides* f. *caldarius* Tilden, Bor. Gaz. 25: 94. 1898. *Pleurocapsa caldaria* Setchell in Collins, Holden & Setchell, Phyc. Bor.-Amer. 18: 851. 1901. *Chroococcopsis caldaria* Geitler, Beih. z. Bot. Centralbl., II, 41: 241. 1925. *Cyanidium caldarium* Geitler, Arch. f. Hydrobiol., Suppl. XII, 4: 624. 1933. *Pluto caldarius* Copeland ex Drouet, Amer. Midl. Nat. 30: 672. 1943. *Dermocarpa caldaria* Drouet, loc. cit. 1943. *Chlorella caldaria* M. B. Allen, Rapp. & Comm. VIII. Congr. Int. Bor. Paris 17: 42. 1954. —Type from Yellowstone national park, Wyoming: Frying Pan basin, J. E. Tilden, Jul. 1896 (in Tild., Amer. Alg. 283, MIN) = CHLORELLA sp. The alga collected by Miss Tilden is definitely a green alga, its starch staining blue with iodine. The alga described by Setchell, Geitler, Copeland, Allen, and Drouet appears to be another species of *Chlorella* with blue-green pigment (see Allen, loc. cit.).

Protococcus botryoides var. *nidulans* Hansgirg, Prodr. Algenfl. Böhmen 1(2): 274. 1888. —Type from Bohemia: Nepomuk, A. Hansgirg, Aug. 1887 (W) = FLAGELLATES. FIG. 331.

Protococcus brunneus Kützling, Phyc. Germ., p. 146. 1845. *P. brunneus* Kützling in Roemer, Alg. Deutschl., p. 67. 1845. *Chroococcus brunneus* Rabenhorst, Fl. Eur. Algar. 2: 34. 1865. —Type from Germany: auf einer Luche am Hundsberge (Hantz, Römer (L) = TRACHELOMONAS sp. FIG. 323.

Protococcus caldarii Magnus ex Braun, Sitzungsber. Ges. Naturf. Fr. Berlin 1875: 99. 1875; ibid. 1877: 249. 1877. —Type from Germany in Rabenh. Alg. Eur. 2465 (L) = primordia (perhaps parasitized?) of TRENTIPOHLLIA sp. FIG. 325.

Protococcus Chlamydomonas Kützling, Phyc. Gener., p. 167. 1843. *Protosphaeria Chlamydomonas* Trevisan, Sagg. Monogr. Alg. Coccot., p. 30. 1848. —Type from Germany: Nordhausen, Kützling, 12 Sept. 1842 (L) = FLAGELLATA (CHLAMYDOMONAS sp.). FIG. 327.

Protococcus chnauensis Kützling in Roemer, Alg. Deutschl., p. 67. 1845. *Chroococcus chnauensis* Rabenhorst, Fl. Eur. Algar. 2: 34. 1865. —Type from Germany: auf Quarzfels des Bruchberges (Harz), Römer 149, 9 Sept. 1844 (L) = CHLOROPHYCEAE (lichen gonidia). FIG. 330.

Protococcus Clementii Meneghini in Kützling, Tab. Phyc. 1: 3. 1846. *Protosphaeria Clementii* Trevisan, Sagg. Monogr. Alg. Coccot., p. 29. 1848. *Haematococcus Clementii* Meneghini pro synon. ex Trevisan, loc. cit. 1848. *Gloocystis Clementii* Rabenhorst, Fl. Eur. Algar. 3: 31. 1868. —Type from the Italian Tyrol: Campagna d'Ariz, Meneghini (L) = FLAGELLATA.

Protococcus coccoma Kützling, Phyc. Gener., p. 168. 1843. *Palmella coccoma* Kunze pro synon. in Kützling, loc. cit. 1843. *Protococcus ananiticus* Wallroth pro synon. in Kützling, loc. cit. 1843. *Protosphaeria coccoma* Trevisan, Sagg. Monogr. Alg. Coccot., p. 29. 1848. *Chlorococcum coccoma* Rabenhorst, Fl. Eur. Algar. 3: 59. 1868. *Haematococcus coccoma* Meneghini pro synon. ex Rabenhorst, loc. cit. 1868. —Type from Germany: Leipzig, Kunze (L) = primordia of CHLOROPHYCEAE.

Protococcus crassus Kützling, Tab. Phyc. 1: 4. 1846. *Chlorococcum crassum* Meneghini pro synon. in Kützling, loc. cit. 1846. *Chroococcus crassus* Nägeli, Gart. Einzell. Alg., p. 46. 1849. —Type from Italy: Verona, Meneghini (L) = FLAGELLATES. FIG. 334.

Protococcus crustaceus Kützling, Phyc. Germ., p. 146. 1845. —Type from Germany: ad corticem arborum, Nordhausen, herb. Kützling (L) = TRENTIPOHLLIA sp., parasitized.

Protococcus dissectus var. *cuneatus* Suringar, Obs. Phycol., p. 56. 1855. —Type from the Netherlands: Boomstammen, Gagewater bij Leiden, W. P. R. Suringar DDD58, May 1854 (L) = CHLOROPHYCEAE.

Protococcus Pelisii Meneghini in Kützling, Tab. Phyc. 1: 4. 1846. —Type from Italy: Ferrara, Meneghini (L) = CHLAMYDOMONAS sp. FIG. 332.

Protococcus fusatus G. S. West, Mém. Soc. Neuchâtel. Sci. Nat. 5: 1023. 1914. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.

Protococcus gigas Kützling, Phyc. Germ., p. 145. 1845. *Planococcus gigas* Trevisan, Sagg. Monogr. Alg. Coccot., p. 34. 1848. *Chlorococcum gigas* Grunow in Rabenhorst, Alg. Eur. 143—144: 1436. 1863. *Gloocystis gigas* Lagerheim, Öfvers. K. Sv. Vet.-Akad. Förh. 40(2): 63. 1883. *Protococcus viridis* var. *gigas* Wolle, Fresh-w. Alg. U. S., p. 183. 1887. —Type from Italy: Battaglia, Meneghini (L) = encysted FLAGELLATES.

Protococcus globosus Nägeli in Kützling, Sp. Algar., p. 200. 1849. —Type from Switzerland: Zürich, Nägeli 369 (L) = PHYTOCONIS BOTRYOIDES (L.) Bory. FIG. 333.

Protococcus glomeratus Agardh, Flora 10(2): 629. 1827. *Micraloa olivacea* Kützling, Linnaea 8: 371. 1833. *Chlorococcum glomeratum* Rabenhorst, Fl. Eur. Algar. 3: 59. 1868. —Type from Bohemia: Carlsbad, Agardh (NY) = juvenile NOSTOC sp.

Protococcus Gostxi Schmidle, Engler Bot. Jahrb. 30: 252. 1901. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.

Protococcus grumosus Richter, Hedwigia 23: 65. 1884. —Type from Germany: ad parietes caldarit in Anger prope Lipsiam, P. Richter, Mar. 1882 (in Witttr. & Nordst., Alg. Exs. 1090, L) = FLAGELLATA.

Protococcus immanis Montagne, Ann. Sci. Nat. IV. Bot. 6: 179. 1856. —Type from Bolivia: Andioa, Weddell (L) = encysted FLAGELLATES (DINOFLAGELLATES?).

Protococcus lilacinus Rabenhorst, Alg. Sachs. 9—10: 81. 1851. *Chroococcus lilacinus* Rabenhorst, Krypt.-Fl. Sachsen 1: 70. 1863. —Isotypes from Germany: in dem steinernen Wassertrog auf dem böhmischen Bahnhofe in Dresden, L. Rabenhorst (FC, L, NY) = BACTERIA. FIG. 326.

CHROOCOCCUS Subgenus CHRYSOCOCCUS Hansgirg, Notarisia 3: 589. 1888; Prodr. Algenfl. Böhmen 2: 159. 1892. —Type species: *Protococcus macrococcus* Kützling, Phyc. Gener., p. 169. 1843. *Protosphaeria macrococcus* Trevisan, Sagg. Monogr. Alg. Coccot., p. 29. 1848. *Chroococcus macrococcus* Rabenhorst, Krypt.-Fl. Sachsen 1: 70. 1863. —Type from Germany: Cohnstein bei Nordhausen, herb. Kützling (L) = encysted PERIDINIUM sp.

Protococcus marinus Kützling, Phyc. Gener., p. 169. 1843. *Microcystis marina* Kützling pro synon., loc. cit. 1843. —Isotypes from Trieste, herb. Kützling (FC, MO, UC) = encysted PERIDINIUM sp.

Protococcus marinus f. *Foslieanus* Hansgirg in Foslie, Mar. Alg. Norway 1: 159. 1890. —Type

from arctic Norway: Bugonæs, M. Foslie, 10 Aug. 1889 (L) = FLAGELLATES.

Protococcus marinus var. *Postlianus* Hansgirg, Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl., 1892: 239. 1893. —Type from Croatia: Fiume, A. Hansgirg, 1891 (W) = PRIMORDIA OF CHLOROPHYCEAE.

Protococcus marinus var. *virens* Hansgirg, Sitzungsber. K. Böhm. Ges. Wiss., Math.-Nat. Cl., 1892: 239. 1892. —Type from Istria: Pola, A. Hansgirg, Apr. 1889 (W) = PRIMORDIA OF CHLOROPHYCEAE. FIG. 328.

PLEUROCOCOCCUS Unterabgattung *DICHOCOCCUS* Nägeli, Die Neuern Algensyst., p. 127. 1847. —Type species: *Protococcus minutus* Kütz., Sp. Algar., p. 203. 1849. *Pleurococcus minutus* Nägeli, Gatt. Einzell. Alg., p. 64. 1849. —Type from Germany: Freiburg-im-Breisgau, A. Braun (NY) = FLAGELLATES.

Protococcus minor Kütz., Phyc. Germ., p. 144. 1845. *P. minor* α *leprosus* Kütz., Tab. Phyc. 1: 3. 1846. *P. minor* var. *leprosus* Kütz., Sp. Algar., p. 198. 1849. *Chroococcus minor* Nägeli, Gatt. Einzell. Alg., p. 46. 1849. *Pleurococcus minor* Rabenhorst, Krypt.-Fl. Sachsen 1: 127. 1863. *P. vulgaris* β *minor* Kirchner ex Lagerheim, Öfvers. K. Sv. Vet.-Akad. Förh. 1882(2): 79. 1882. *P. vulgaris* var. *minor* Kirchner ex Hansgirg, Prodr. Algenfl. Böhmen 1: 133. 1886. *P. Kuetzingii* G. S. West, Journ. of Bot. 42: 287. 1904. *Protococcus Kuetzingii* G. S. West, Journ. of Bot. 54: 2. 1916. *Gloeoecapia minor* Hollerbach in Elenkin, Monogr. Algar. Cyanophyc., Pars Spec. 1: 238. 1938. —Type from Germany: Nordhausen, herb. Kütz. (L) = STICHOCOCCUS SUBTILIS (Kütz.) Klerck. FIG. 324.

Protococcus minor β *mucosus* Kütz., Tab. Phyc. 1: 3, Tab. 3, fig. 22 β . 1846. *P. minor* var. *mucosus* Kütz., Sp. Algar., p. 198. 1849. *Chroococcus minor* f. *mucosus* Rabenhorst, Fl. Eur. Algar. 2: 30. 1865. *C. minor* var. *mucosus* Kütz. ex Hansgirg, Prodr. Algenfl. Böhmen 2: 165. 1892. —Type from Germany: Hanau, F. T. Kütz. 159 (L) = FLAGELLATES. FIG. 321.

Protococcus Monas β *oblongus* Plotow, Nova Acta Acad. Caes. Leop.-Car. Nat. Cur. 20(2): 478. 1842. —Topotype from Hirschberg, Bohemia, in Rabenh. Alg. Sachs. 71 (FC) = PROTOCOCCUS GREVILLEI (Ag.) Crouan fr.

Protococcus moniliformis Plotow, Nova Acta Acad. Caes. Leop.-Car. Nat. Cur. 20(2): 459. 1842. —Topotype from Hirschberg, Bohemia, in Rabenh., Alg. Sachs. 71 (FC) = PROTOCOCCUS GREVILLEI (Ag.) Crouan fr.

Protococcus mucosus Kütz., Phyc. Germ., p. 145. 1845. *Pleurococcus mucosus* Rabenhorst, Krypt.-Fl. Sachsen. 1: 127. 1863. —Type from Germany: Nordhausen, Kütz. (L) = BOTRYDIUM GRANULATUM (L.) Gräv.

Protococcus natans Agardh ex Willie, Nyt Mag. Naturvid. 56(1): 55. 1918. —Isotype from Bohemia: Carlsbad, ex herb. Agardh (NY) = palmelloid basal parts of STIGEOCLONIUM TENUE (Ag.) Kütz.

Protococcus nebulosus Kütz., Linnaea 8: 365. 1833. *Cryptococcus nebulosus* Kütz., Phyc. Gener., p. 147. 1843. —Type from Germany: in aquae superficie natans, Nordhusae, Kütz. (L) = BACTERIA.

Protococcus palustris Kütz., Phyc. Gener., p. 168. 1843. *Pleurococcus palustris* Trevisan, Sagg. Monogr. Alg. Coccot., p. 34. 1848. —Type from Germany: in stagnis prope Halle, herb. Kütz. (L) = PRIMORDIA OF CHLOROPHYCEAE.

Protococcus persicinus Diesing in Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 13. 1843. *Pleurococcus persicinus* Rabenhorst, Fl. Eur. Algar. 3: 28. 1868. —Type from the Euganean springs, Italy: "Protococcus persicinus Dies." (Fl) = BACTERIA.

Protococcus pluvialis β *aquaticus* Kütz., Phyc. Germ., p. 146. 1845. —Topotype from Hirschberg, Bohemia, in Rabenh. Alg. Sachs. 71 (FC) = PROTOCOCCUS GREVILLEI (Ag.) Crouan fr.

COHNIA Winter, Rabenh. Krypt.-Fl. 1(1): 48. 1884; non Kunth, 1850, non Reichenbach, 1852. *LAMPROCYSTIS* Schröter, Pilze Schlesiens 1: 151. 1886. —Type species: *Protococcus roseo-persicinus* Kütz., Phyc. Germ., p. 146. 1845. *Pleurococcus roseo-persicinus* Rabenhorst, Fl. Eur. Algar. 3: 28. 1868. *Clathrocystis roseo-persicina* Cohn, Hedwigia 12: 58. 1873. *Beggiatoa roseo-persicina* Zopf, Morph. Spaltpfl., p. 30. 1882. *Cohnia roseo-persicina* Winter, Rabenh. Krypt.-Fl. 1(1): 48. 1884. *Lamprocystis roseo-persicina* Schröter, Pilze Schlesiens 1: 801. 1889. *Lamkesteron roseo-persicinus* Ellis, Sulphur Bacteria, p. 135. 1932. —Type from Germany: in Infusione unter Algen, Nordhausen, F. T. Kütz. (L) = LAMPROCYSTIS ROSEA (Kütz.) Dr. & Daily.

Protococcus roseus Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 14. 1843. *Pleurococcus roseus* Rabenhorst, Fl. Eur. Algar. 2: 27. 1868. *Chroococcus roseus* Wille, Nyt Mag. Naturvid. 62: 178. 1925. —Type from Italy: ad muros calce illius, Meneghini (L) = PRIMORDIA OF A LICHEN.

Protococcus rubiginosus Suringar, Obs. Phycol., p. 57. 1855. *Chroococcus rubiginosus* Rabenhorst, Fl. Eur. 2: 43. 1865. —Type from Holland: Sloot Oenkerk, W. P. R. Suringar DDD556, Jul. 1854 (L) = FLAGELLATA.

Protococcus sabulosus Meneghini in Kütz., Tab. Phyc. 1: 3. 1846. *Protothuberia sabulosa* Trevisan, Sagg. Monogr. Alg. Coccot., p. 29. 1848. *Haematococcus sabulosus* Trevisan pro synon.,

loc. cit. 1848. *Gloeocapsa sabulosa* Richter in Witrock & Nordstedt, Alg. Exs. 14: 698. 1884. *Chroococcus sabulosus* Hansgirg, Prodr. Algenfl. Böhmen 2: 164. 1892. —Type from Italy: in exsiccatis, Baenka, Meneghini (L) = FLAGELLATES.

Protothoccus salinus Dunal, Ann. Sci. Nat. II. Bot. 9: 1838. —The original description is here designated as the temporary Type = FLAGELLATES.

Protothoccus stercorarius Berkeley in Hooker, Bot. Antarctica. Voy. Erebus & Terror, 1839—43, 1(2): 501. 1847. *Pleurococcus stercorarius* Berkeley ex Hariot, Mission du Cap Horn, Alg., p. 15, 1869. —Type from Falkland islands: on cow dung, herb. Berkeley (K) = encysted FLAGELLATES. FIG. 322.

Protothoccus sectorum Kützinger, Tab. Phyc. 1: 4. 1846. *Pleurococcus sectorum* Trevisan, Sagg. Monogr. Alg. Coccot., p. 34. 1848. *P. angulosus* b. *sectorum* Kieckhefer ex Hansgirg, Prodr. Algenfl. Böhmen 1: 133. 1886. —Type from Germany: Strohdächer, Clausen, Römer (L) = primordia of CHLOROPHYCEAE.

Protothoccus variabilis Hansgirg, Physiol. & Algol. Stud., p. 87. 1887; Oesterr. Bot. Zeitschr. 37: 122. 1887. —Type from Bohemia: Kinsky'scher Garten, Smichow, A. Hansgirg, Sept. 1886 (W) FLAGELLATES. FIG. 322.

Protothoccus viridis Agardh, Syst. Algar., p. 13. 1824. *Chlorococcum murorum* Greville, Scott. Crypt. Fl. 6: 325. 1828. *Leparia murorum* Greville ex Hooker, Engl. Fl. 5(1) [Brit. Fl. 2]: 163. 1833. *Chlorococcum murale* Greville in Meneghini, Consp. Algol. Eugani., p. 324. 1837. *C. Agardhii* Meneghini, Giorn. Toscana Sci. Med., Fis. & Nat. 1: 186. 1840. *Haematococcus murorum* Hassall, Hist. Brit. Freshw. Alg. 1: 323. 1845. *Hassallia murorum* Trevisan, Sagg. Monogr. Alg. Coccot., p. 68. 1848. *Pleurococcus murorum* Meneghini ex Trevisan pro synon., loc. cit. 1848. *Leparia murorum* Schaerer, Enum. Crit. Lich. Eur., p. 241. 1850. *Pleurococcus viridis* Rabenhorst, Krypt.-Fl. Sachsen 1: 127. 1863. —No specimens labeled "Protothoccus viridis" were found in the herbarium of the Agardhs except for some collected by A. Braun in the 1840's. The original description is here designated as the temporary Type = STICHOCOCCEUS SUBTILIS (Kütz.) Klerck.

Protothoccus viridis var. *inignis* Hansgirg, Prodr. Algenfl. Böhmen 1(2): 141. 1888. —Type from Bohemia: Wrsowic nächst Prag, A. Hansgirg, May 1886 (W) = FLAGELLATES. FIG. 329.

Protothoccus Wimperi Hilse in Rabenhorst, Alg. Eur. 103—104: 1031. 1861. *Chlorococcum Wimperi* Rabenhorst, Fl. Eur. Algar. 3: 60. 1868. *Protothoccus viridis* var. *Wimperi* Wolle, Freshw. Alg. U. S., p. 183. 1887. —Type from Silesia (Poland): in fodiis prope Peterwitz, Hilse (in Rabenh.), Alg. Eur. 1031. L = encysted FLAGELLATES.

PROTOSPHAERIA Turpin, Dict. Sci. Nat., vol. 65 (Végét. Acot.), p. 1. 1816—29. —Type species: *P. simplex* Turpin, loc. cit. 1816—29. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.

Rhabdoderma Cavanillesianum Gonzalez Guerrero, Anal. Jard. Bot. Madrid 6: 244. 1946. —The original description is here designated as the temporary Type = NOSTOCACEAE.

Rhabdoderma lineare var. *spirale* Woloszyńska, Bull. Int. Acad. Sci. Cracovie, Cl. Sci. Math. & Nat., ser. B, 1912: 692. 1913. *Rhabdoderma lineare* f. *spirale* Hollerbach in Elenkin, Monogr. Algar. Cyanophyc., Pars Spec. 1: 44. 1938. —The original description is here designated as the temporary Type = LYNGBYA CONTORTA Lemm.

Rhabdoderma minimum Lemmermann, Arch. f. Hydrobiol. & Planktonk. 4: 187. 1909. —The original description is here designated as the temporary Type = BACTERIA.

Rhabdoderma salinum Tucin, Trans. Linn. Soc. London, ser. 3, 1(2): 200. 1940. —Type from Bolivia: plankton, Lake Poopó, Titicaca region, no. 193/2 (BM) = BACTERIA.

Rhodococcus intermedius Bargagli-Petrucchi, N. Giorn. Bot. Ital., N. S., 22(4): 399. 1915. —The original description is here designated as the temporary Type = BACTERIA.

Rhodospirillum diffluens Nadson, Bull. Jard. Imp. Bot. St. Petersburg 8: 113. 1908. —The original description is here designated as the temporary Type = LAMPROCYSTIS ROSEA (Kütz.) Dr. & Daily.

RHODOSPORA Geider, Oesterr. Bot. Zeitschr. 76: 25. 1927. —Type species: *R. sordida* Geider, loc. cit. 1927. —The original description is here designated as the temporary Type = RHODOPHYCEAE.

RHODOSTICHUS Geitler & Pascher, Arch. f. Protistenk. 73: 305. 1931. —Type species: *R. expansus* Geitler & Pascher, loc. cit. 1931. —The original description is here designated as the temporary Type = BACTERIA.

Rosaria clandestina Skuja in Handel-Mazzetti, Symbolae Sinicae 1: 18. 1937. —Type from Szechwan, China: heiße Quelle bei Lemoka in Lolo-Lande ostlich von Ningyuen, H. Handel-Mazzetti 1621, 23 Apr. 1914 (W) = HAPALOSIPHON LAMINOSUS (Kütz.) Hansg.

ROSARIA Carter in Compton, Journ. Linn. Soc. Bot. 46: 54. 1922; non Carmichael, 1833. *NELLIECARTERIA* J. de Toni, Not. Nomencl. Algol. 8. 1936. —Type species: *Rosaria ramosa* Carter, Journ. Linn. Soc. Bot. 46: 54. 1922. *Nelliecarteria ramosa* J. de Toni, Not. Nomencl. Algol. 8. 1936. —Type from New Caledonia: *R. H. Compton 1181* (in the slide collection, BM) = FUNGI.

Sarcina tenuis Hepworth, Quart. Journ. Microsc. Soc. 5: 2. 1857. *Merismopodia tenuis*

Rabenhorst, Fl. Eur. Algar. 2: 59. 1865. —The original description is here designated as the temporary Type = BACTERIA.

SARCINA Goodsir, Edinburgh Med. & Surg. Journ. 57: 434, 437. 1842. —Type species: *S. ventriculii* Goodsir, ibid. p. 433, 437. 1842. *Merismopodia ventriculii* Robin, Hist. Nat. Végét. Parasites, p. 331. 1853. *M. Goodsirii* Husemann, De Animal. & Vegemb. in Corp. Humano Parasitanc., p. 13. 1853. —Paratype, designated here as the Type, in Rabenh., Alg. Sachs. 600 (L) = *SARCINA VENTRICULII* Goods. FIG. 353.

Sarcina Welckeri Rossmann, Zeitschr. f. Wiss. Bot. 40: 643. 1857. *S. vesicae* Rossmann pro synon., loc. cit. 1857. *S. urinae* Rossmann pro synon., loc. cit. 1857. *Merismopodia urinae* Rabenhorst, Fl. Eur. Algar. 2: 59. 1865. —The original description is here designated as the temporary Type = BACTERIA.

SARCODERMA Ehrenberg, Ann. der Phys. & Chem. 18: 504. 1830. —Type species: *S. sanguineum* Ehrenberg, loc. cit. 1830. —The original description is here designated as the temporary Type = EUGLENA sp.

SCHRAMMIA Dangeard, Le Botaniste, ser. I, 1889; 161. 1889. —Type species: *S. barbata* Dangeard, ibid., p. 158. 1889. —The original description is here designated as the temporary Type = GLOBOCHAETE WITTROCKIANA Lagerh., according to Lagerheim in Nuova Notarisia 1: 227 (1890) = CHLOROPHYCEAE.

Siderocapsa major f. *chromophila* Naumann, K. Sv. Vet.-Akad. Handl. 62(4): 16. 1921. —The original description is here designated as the temporary Type = BACTERIA.

Siderocapsa major f. *chromophoba* Naumann, K. Sv. Vet.-Akad. Handl. 62(4): 16. 1921. —The original description is here designated as the temporary Type = BACTERIA.

SIDEROTHECE Naumann, K. Sv. Vet.-Akad. Handl. 62(4): 17. 1921. —Type species: *S. major* Naumann, loc. cit. 1921. —The original description is here designated as the temporary Type = BACTERIA.

Siderotheca minor Naumann, K. Sv. Vet.-Akad. 62(4): 17. 1921. —The original description is here designated as the temporary Type = BACTERIA.

Sorochloris vinosa Kufferath, Bull. Inst. Roy. Sci. Nat. Belg. 26(2): 10. 1950. —Topotype from Belgium; with *Coelosphaerium Laloupii* Kuff., Bois-sur Geer, L. Brongersma, 28 Nov. 1951 (D, L) = BACTERIA.

Sorospira virescens Hassall, Hist. Brit. Freshw. Alg. 1: 310. 1845. *Microhalva virescens* Kütz. Sp. Algar., p. 207. 1849. *Cagniardia virescens* Trevisan, Sagg. Monogr. Alg. Coccol., p. 50. 1848. *Applanocapsa virescens* Rabenhorst, Fl. Eur. Algar. 2: 48. 1865. —Type from England; Dorset, 1847 (in the slide collection, BM) = FLAGELLATES.

Sphaenosiphon minimus Reinsch, Contrib. Algol. & Fungol. 1: 16. 1874. —Type on *Bryopsis Balbiana* from Italy; ad Genuam, J. G. Agardh (FC) = BACTERIA.

Sphaenosiphon sorediiformis Reinsch, Contrib. Algol. & Fungol. 1: 16. 1874. *Dermocarpa sorediiformis* Geitler, Rabenh. Krypt.-Fl. 14: 396. 1932. —Type from the Mediterranean sea; in *Giraudia simplex* (K) = CHLOROPHYCEAE (ENTOCALADIA sp?).

Sphaerogonium gracile Roscinski, Rozpr. Akad. Umiej. Krakow., Wydz. Math.-Przyr., 10: 293. 1883. *Chamaesiphon Roscinskii* Hansgirg, Physiol. & Algol. Stud., p. 164. 1887; Oesterr. Bot. Zeitschr. 37: 56. 1887. —Topotype from Polish Ukraine: Siklawka pod Giewontem, M. Raciborski, 3 Oct. 1909 (WU) = juvenile AMPHITHRIX JANTHINA (Mont.) Born. & Flah.

Staurogenia Tetrapedia Kirchner, Jahresh. Ver. Vaterl. Naturk. Württemberg 36: 168. 1880. *Tetrapedia Kirchneri* Lemmertmann, Ber. Deutsch. Bot. Ges. 18: 24. 1900. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.

Stichosiphon Hansgirgii Geitler, Rabenh. Krypt.-Fl. 14: 414. 1932. —Type from Bohemia: Johannsbad, A. Hansgirg, Jun. 1885 (W) = AMPHITHRIX JANTHINA (Mont.) Born. & Flah. FIG. 301.

Synechococcus bigranulatus Skuja, Fedde Repert. Sp. Nov. 31: 7. 1933. —The original description is here designated as the temporary Type = PHORMIDIUM LAMINOSUM (Ag.) Gom., hormogonia.

Synechococcus Boshardii Skuja, Fedde Repert. Sp. Nov. 31: 7. 1933. —The original description is here designated as the temporary Type = PHORMIDIUM LAMINOSUM (Ag.) Gom., hormogonia.

Synechococcus brunneolus Rabenhorst, Krypt.-Fl. Sachsen 1: 75. 1863. —Isotypes with *Sirospira coralloides* from Saxony in Rabenh., Alg. Sachs. 224 (FC) = MESOTABNIUM RUBESCENS (Bréb.) Dr. & Daily.

Synechococcus elongatus Geitler, Oesterr. Bot. Zeitschr. 70: 166. 1921. *S. Geitleri* J. de Toni, Noer. Nomencl. Algol. 3. 1936. —Paratype from western Java: Travertin-Hügel von Kuripan, Rüchser (slide BK2b in the collection of L. Geitler) = PHORMIDIUM TENUE (Menegb.) Gom., hormogonia.

Synechococcus fuscus Zeller, Journ. Asiatic Soc. Bengal 42(2): 176. 1873; Hedwigia 12: 169. 1873. —Type from Burma: Yomah, S. Kurz 3258 (L) = mature spores of CYLINDROSPERMUM LICHENIFORME (Bory) Kütz.

Synechococcus Gaarderi Alvik, *Bergens Mus. Arbok* 1934 (Naturvid. Rekke 6): 40. 1934. —The original description is here designated as the temporary Type = BACTERIA.

Synechococcus intermedius Gardner, *Mem. New York Bot. Gard.* 7: 3. 1927. —Type from Puerto Rico: Caguas, N. Wille 4396, 1915 (NY) = hormogonia of *SCYTONEMA HOFMANNII* Ag. FIG. 354.

Synechococcus kerguelensis Wille, *Deutsche Südpolar-Exped.*, 1901—03, 8: 417. 1928. —The original description is here designated as the temporary Type = BACTERIA.

Synechococcus roseo-pericinus Grunow in Rabenhorst, *Fl. Eur. Algar.* 3: 418. 1863. —Type from Slovakia: in aqua stagnante ad Olascinum Sepusii, C. Kalcbbrenner (W) = BACTERIA.

Synechococcus salinus Prémý in J. de Toni, *Diagn. Alg. Nov.*, I, Myxophyc. 8: 703. 1946. —The original description is here designated as the temporary Type = BACTERIA.

Synechococcus ulcericola Rabenhorst, *Fl. Eur. Algar.* 3: 418. 1868. —The original description is here designated as the temporary Type = spores of FUNGI.

COCCOBACTREACEAE Elenkin, *Acta Inst. Bot. Acad. Sci. U. R. S. S.*, II, 1: 19. 1933. —Type genus: *SYNECHOCYSTIS* Sauvageau, *Bull. Soc. Bot. France*, ser. 2. 14: cxv. 1892. *SYNECHOCOCCUS* Subgenus *SYNECHOCYSTIS* Elenkin, *Nor. Syst. Inst. Crypt. Horti Bot. Petropol.* 2: 65. 1923. —Type species: *Synechocystis aquatilis* Sauvageau, *Bull. Soc. Bot. France*, ser. 2. 14: cxvi. 1892. —Type from Algeria: Hamman-Salahin près Biskra, C. Sauvageau, Apr. 1892 (PC) = palmelloid CHLOROPHYCEAE. FIG. 357.

Synechocystis salina Wislouch, *Acta Soc. Bot. Polon.* 2: 111. 1924. —The original description is here designated as the temporary Type = BACTERIA.

Tetrachloris merismopedioides Skuja, *Symbolae Bot. Upsal.* 9(3): 27. 1948. —The original description is here designated as the temporary Type = BACTERIA.

Tetrapedia avorsa W. & G. S. West, *Journ. of Bot.* 35: 301. 1897. —Type from Angola: in stagnis prope Anbilla (Condo), Pungo Andongo, P. Welwitsch 177, Mar. 1857 (BM) = TETRAEDRON sp.

Tetrapedia crux-Michaeli Reinsch, *Algenfl. Mittl. Th. Frankeu*, p. 38. 1867. *T. crux-molitoris* Reinsch ex Lemmermann, *Krypt.-Fl. Mark Brandenb.* 3: 89. 1907. —The original description is here designated as the temporary Type = PEDIASTRUM sp.

LEMMERMANNIA Chodat, *Mém. Herb. Boissier* 17: 3. 1900. —Type species: *Tetrapedia emarginata* Schröder, *Ber. Deutsch. Bot. Ges.* 15: 490, 492. 1897. *Lemmermannia emarginata* Chodat, *Mém. Herb. Boissier* 17: 5. 1900. —The original description is here designated as the temporary Type = CHLOROPHYCEAE.

Tetrapedia foliacea Turner, *K. Sv. Vet.-Akad. Handl.* 25(I, 5): 12. 1892. —The original description is here designated as the temporary Type = CHLOROPHYCEAE (TETRAEDRON sp.?).

TETRAPEDIACEAE Elenkin, *Acta Inst. Bot. Acad. Sci. U. R. S. S.*, II, 1: 19: 1933. —Type genus: *TETRAPEDIA* Reinsch, *Algenfl. Mittl. Th. Frankeu*, p. 37. 1867; *Act. Soc. Senckenh.* 6: p. 30 of reprint. 1867. —Type species: *T. gothica* Reinsch, loc. cit. 1867. —The original descriptions are here designated as the temporary Type = TETRAEDRON sp.

Tetrapedia morsu W. & G. S. West, *Trans. Linn. Soc. Bot.*, ser. 2. 5: 85. 1895. —Type from Madagascar: near Lake Alastura, R. Baron 3 (BIRM) = TETRAEDRON sp.

Tetrapedia Penzigena de Toni, *Hedwigia* 1891: 195. 1891. —The original description is here designated as the temporary Type = PEDIASTRUM sp.

Tetrapedia Reinschiana Archer, *Quart. Journ. Microsc. Sci.*, N. S., 12: 364. 1872. —The original description is here designated as the temporary Type = TETRAEDRON sp.

Tetrapedia setigera Archer, *Quart. Journ. Microsc. Sci.*, N. S., 12: 365. 1872. *Polyedrium trigonum* var. *setigerum* Schröder, *Forschungsher. Biol. Sta. Plön* 6: 23. 1898. *Tetradron trigonum* var. *setigerum* Lemmermann, *Arch. f. Bot.* 2(2): 110. 1904. *Tetrapedia setigera* G. M. Smith, *Fresh-w. Alg. U. S.*, p. 499. 1933. —The original description is here designated as the temporary Type = TETRAEDRON sp.

Tetrapedia trigona W. & G. S. West, *Journ. Linn. Soc. Bot.* 30: 277. 1894. —Type from St. Vincent, British West Indies: with *Cosmarium pseudopyramidalum*, W. R. Elliott 477A (in the slide collection, BM) = TETRAEDRON sp.

Tetrapedia Wallichiana Turner, *K. Sv. Vet.-Akad. Handl.* 25(I, 5): 12. 1892. —The original description is here designated as the temporary Type = PEDIASTRUM sp.

Tetraspora didyma Liebmann, *Naturh. Tidskr.* 2: 473. 1838—39. —Type from Denmark: in amne ad Nyemolle, Liebmann (C) = TETRASPORA GELATINOSA (Vaucl.) Desv.

Thlephora sanguinea Persoon, *Syn. Meth. Fung.*, p. 575. 1801. *Palmella sanguinea* Ehrenberg, *Ann. der Physik & Chem.* 18: 510. 1830. —Type labeled: "*Thlephora sanguinea*", Greville, in herb. Persoon (L) = FECES OF INSECTS.

THIOPEDIA Winogradsky, *Beitr. a. Morphol. & Physiol. der Bacteria* 1: 85. 1888. —Type species: *T. rosea* Winogradsky, loc. cit. 1888. *Lampropedia rosea* de Toni & Trevisan in Saccardo, *Syll. Fung.* 8: 1049. 1889. —The original description is here designated as the temporary Type = ERYTHROCNIS LITTORALIS Oestr.

MERRETTIA S. F. Gray, *Nat. Arr. Brit. Pl.*, p. 348. 1821. —Type species: *Tromella adnata*

Linnaeus, Sp. Plant., ed. 2, 2: 1626. 1763. *Palmella adnata* Lyngbye, Tent. Hydrophyt. Dan., p. 205. 1819. *Merrettia adnata* S. F. Gray, Nat. Arr. Brit. Pl., p. 348. 1821. *Microcystis adnata* Meneghini, Mem. R. Accad. Sci. Torino, ser. 2, 5 (Sci. Fis. & Mat.): 47. 1843. *Bicharia adnata* Trevisan, Nomencl. Algar. 1: 59. 1845. *Glovocystis adnata* Nägeli, Gart. Einzell. Alg., p. 65. 1849. —The original description is here designated as the temporary Type = LICHEN?

PORPHYRIDIDIUM Nägeli, Gart. Einzell. Alg., p. 71. 1849. *RHODOCOCCUS* Sectio *PORPHYRIDIDIUM* Hansgirg, Oesterr. Bot. Zeitschr. 34: 315. 1884. *APHANOCAPSA* Subgenus *PORPHYRIDIDIUM* Hansgirg, Prodr. Algaef. Böhmén 2: 154. 1892. —Type species: *Tremella cruenta* Smith & Sowerby, Engl. Bot. 25: 1800. 1807. *Olivia cruenta* S. F. Gray, Nat. Arr. Brit. Pl., p. 350. 1821. *Palmella cruenta* Agardh, Syst. Algar., p. 15. 1824. *Coccobloris cruenta* Sprengel, Linn. Syst. Vegetab., ed. 16, 5(1): 373. 1827. *Phycoconis cruenta* Trevisan, Prosp. Fl. Eugani., p. 57. 1842. *Porphyridium cruentum* Nägeli, Gart. Einzell. Alg., p. 71. 1849. *Aphanocapsa cruenta* Hansgirg, Ber. Deutsch. Bot. Ges. 3: 16. 1885; Bot. Centralbl. 22: 55. 1885. —Type from London, England (BM) = *PORPHYRIDIDIUM CRUENTUM* (Sm. & Sow.) Näg.

TRICHODICTYON Kützinger, Phyc. Germ., p. 153. 1845. —Type species: *T. rupestre* Kützinger, loc. cit. 1845. *Penium rupestre* Rabenhorst, Fl. Eur. Algar. 3: 120. 1868. *Gyges rupestris* Kuntze, Rev. Gen. Pl. 2: 896. 1891. *Cylindrocystis rupestris* Dalla Torre & Sarnothin, Fl. Tirol, Vorarl. & Liechtenst. 2: 59. 1901. —Type from Germany: an feuchte Felsen, Clansthal, Römér (L) = *MESOTABNIUM RUBESCENS* (Bréb.) Dr. & Daily.

TUBIELLACEAE Elenkin, Sovetsk. Bot. 2(5): 56. 1934. —Type genus: *TUBIELLA* Hollerbach in Elenkin, loc. cit. 1934; Hollerbach, Acta Inst. Bot. Acad. Sci. U. R. P. S. S., II, 2: 34. 1935. —Type species: *T. Elenkinii* Hollerbach, loc. cit. 1934, 1935. —The original description is here designated as the temporary Type = young *NOSTOC* sp.

HYDROGASTRUM Desvaux, Obs. sur les Pl. des Env. d'Angers, p. (18). 1818. *DESMAZIERELLA* Gaillon, Aperçu d'Hist. Nat., p. 33. 1833. —Type species: *Uva granulata* Linnaeus, Sp. Plant., p. 1164. 1753. *Tremella globosa* Weiss, Pl. Crypt. Fl. Göttingens., p. 28. 1770. *Linckia granulata* Weber in Wiggers, Primit. Fl. Holsat., p. 94. 1780. *Hydrogastrium granulatum* Desvaux, Obs. sur les Pl. des Env. d'Angers, p. (19). 1818. *Vaucheria radicata* Agardh, Syst. Algar., p. 173. 1824. *Coccobloris radicata* Sprengel, Linn. Syst. Vegetabil., ed. 16, 4(1): 372. 1827. *Bostrydium granulatum* Greville, Alg. Brit., p. 196. 1830. *Desmazierella granulata* Gaillon, Aperçu d'Hist. Nat., p. 33. 1833. —Type in the Linnaean herbarium in the Linnaean Society of London = *BOTRYDIUM GRANULATUM* (L.) Grev.

SCYTHYMENIA Agardh, Syst. Algar., xx. 1824. —Type species: *Uva rupestris* Smith & Sowerby, Engl. Bot. 31: 2194. 1810. *Merrettia coriacea* S. F. Gray, Nat. Arr. Brit. Pl., p. 348. 1821. *Scythymenia rupestris* Agardh, Syst. Algar., p. 30. 1824. —Type from England: E. B. 2194, Dr. Smith in herb. Sowerby (BM) = *STIGONEMA MINUTUM* (Ag.) Hass.

PROTOCOCCUS Agardh, Syst. Algar., p. xvii. 1824. —Type species: *Uredo nivalis* Bauer, Quart. Journ. Lit. Sci. & Arts 7: 225. 1819. *Globulina sanguinea* Turpin, Dict. Sci. Nat. 65 (Végét. Acot.): pl. 7, fig. 1. 1816—29; Mém. Mus. d'Hist. Nat. Paris 14: 26, 63. 1827. *Protococcus nivalis* Agardh, Syst. Algar., p. 13. 1824. *Sphaerella nivalis* Sommerfeldt, Mag. f. Naturvid. 4: 252. 1824. *Palmella nivalis* Hooker, Append. Parry's Journ., 2nd Voy. 1821—23, p. 428. 1825. *Coccobloris nivalis* Sprengel, Linn. Syst. Vegetabil., ed. 16, 4(1): 373. 1827. *Cocophyllum nivalis* Link, Handb. Erkenn. Gewächse 3: 342. 1833. *Chlamydomonas nivalis* Wille, Nyr. Mag. Naturvid. 41(1): 147. 1903. —Type from Baffin bay, Canada: "specimen ex itinere Rossii" in herb. Agardh (LD) = *PROTOCOCCUS NIVALIS* (Bauer) Ag.

Xenococcus Schombaei var. *pallidus* Hansgirg, Oesterr. Bot. Zeitschr. 39: 5. 1889. —Type from Dalmatia: Zara, A. Hansgirg, Aug. 1888 (W) = primordia of *CHLOROPHYCEAE*. FIG. 358.

ZACHARLASIA Lemmermann, Forschungsber. Biol. Sta. Plöa 3: 60. 1895. —Type species: *Z. endophytica* Lemmermann, loc. cit. 1895. —The original description is here designated as the temporary Type = *RHODOPHYCEAE*, according to Geider & Manfeld in Engler & Prantl, Natürl. Pflanzenfam., ed. 2, 1b: 225 (1942).

ILLUSTRATIONS

The photomicrographs were made from herbarium material mounted in water or dilute solutions of detergents on mica slips or glass slides. At the magnification (430 X) and with the equipment used, 1 millimeter equals 2.0 microns. Mrs. Fay K. Daily processed the films and made the prints reproduced here.

The prints for Figs. 15, 90A, 107, 142, 144, 162, 175 and 311 were